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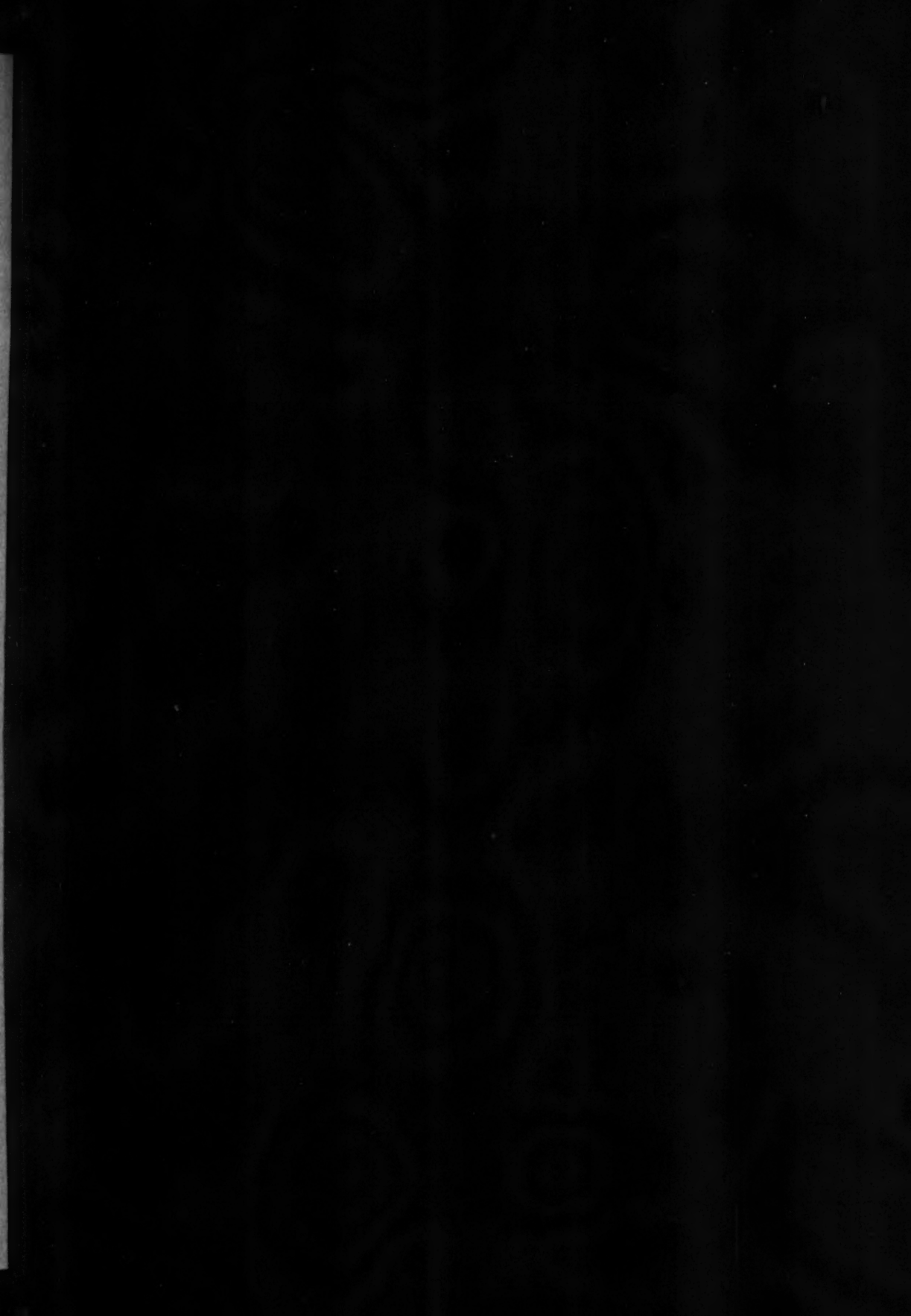
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VOL. IX—DECEMBER, 1906—No. 1

CONTENTS

Daniel D. Tompkins, 1795	<i>Frontispiece</i>
Daniel D. Tompkins	JOHN B. PINE 1
The Technical School and the University	WILLIAM H. BURR 8
Inaugural Address of the Kaiser Wilhelm Professor, <i>with portrait</i>	
	HERMANN SCHUMACHER 17
Recent Progress in Pharmaceutical Education and Legislation . .	H. H. RUSBY 26
Library Extension	JAMES H. CANFIELD 29
Some Reflections on the Growth of Columbia College . . .	J. H. VAN AMRINGE 34
Edmund Howd Miller, <i>with portrait</i>	M. T. BOGERT 37
The New Secretary of Commerce and Labor	JOHN BASSETT MOORE 40
The Tenth International Geological Congress	J. F. KEMP 42
Exhibition of Manuscripts	V. G. SIMKHOVITCH 44
EDITORIAL COMMENT	47
E. H. Miller—Alumni Representation in College Government—The Kaiser Wilhelm Professor—Annual Reports, 1905—1906—The New Program of Studies—The New Fee System in the College—The New Dean of Applied Science	
THE UNIVERSITY	56
Medicine—Political Science—Philosophy—Pure and Applied Science—Teachers College—College of Pharmacy—Miscellaneous Notes	
LEGISLATION	94
The Trustees, October and November Meetings—The Council, October Meeting	
STUDENT LIFE	C. A. S. 97
ATHLETICS	C. A. S. 98
THE ALUMNI	98
NECROLOGY	102
UNIVERSITY STATISTICS	R. T., JR. 103

Columbia University Quarterly

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DANIEL D. TOMPKINS

CLASS OF 1795

COLUMBIA

UNIVERSITY QUARTERLY

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DANIEL D. TOMPKINS

CLASS OF 1795

FEW more striking instances of the self-made man can be found in the history of this country than the "farmer's boy" who was four times elected governor of the State of New York, and twice elected vice-president of the United States. The son of a Westchester farmer, born and bred on a farm, Daniel D. Tompkins was fully entitled to the popular sobriquet, which distinguished him during his political career from his more aristocratic rival, DeWitt Clinton, and his remarkable success was due in no small degree to the fact that he was a man of the people. His training for College, such as it was, he acquired between the furrows, and while he certainly inherited the spirit which distinguished his father, his patrimony consisted of little else but blood and brains.

His ancestors came from the north of England and settled at Plymouth prior to 1640. His grandfather, Nathaniel Tompkins, removed in 1665 to Eastchester, of which he was one of the first proprietors, and his father, Jonathan G. Tompkins, combined farming with public duties, serving throughout the Revolution as a member of the legislature, and also as a member of the State Convention that adopted the Declaration of Independence and the first constitution of the State. He was also a judge of the court of

Common Pleas for many years and upon the creation of the State University, he was appointed one of the regents. Daniel was the seventh son of Judge Tompkins, and was born at Fox Meadows, now known as Scarsdale (New York), on June 21, 1774. A bronze tablet commemorates his birth-place.

Entering Columbia College in 1791, he graduated four years later with the highest honors. The estimate which he placed upon his college education may be inferred from a letter written twelve years after his graduation, when he was governor, strongly advising a friend to send his son to college, urging that "the want of a more thorough classical education will, forever, keep him in the lowest and most contemptible grade of his profession."

Among the voluminous papers which he left, and which years afterwards were purchased by the State, are several of his college essays, one of which, dated September 15, 1792, is entitled "On the necessity of establishing when young a character which we intend to support in after life and act always agreeably thereto." His own character showed itself early, and the alert mind, the indefatigable energy and the genial personality that marked him in college, were his prominent traits in later life. Two years after graduation he was admitted to the bar. Politics were his great interest, when a very young man, and, in 1801, he was elected a member of the Assembly and a delegate to the Constitutional Convention of that year. DeWitt Clinton, of the class of 1786, was the leader of the more numerous faction of the Republican party on the issue of the powers of the Council of Appointment, and Tompkins by his nerve and independence soon made himself the leader of the minority. For the next twenty years these two Columbia men were the most conspicuous figures in New York State politics.

Alexander in his recently published work* portrays the situation and the men. "The record of New York politics," he writes, "is a record of long and bitter contests between these chiefs of two antagonistic factions. What the struggle between Stalwarts and Half Breeds was to our time, the struggle between Clinton and

* A political history of the State of New York, by Dr. Alva Stanwood Alexander, A.M., 1906

Tompkins was to our ancestors of two and three generations ago. Two men could hardly be more sharply contrasted—the one appeared cold and reserved, the other most gracious and gentle; Clinton's self-confidence destroyed the fidelity of those who differed in opinion. Tompkins' urbanity disarmed their disloyalty. . . . Tompkins always firm and dignified, was affable in manner, sympathetic in speech, overflowing with good-nature, and unpretending to all who approached him. It used to be said that Tompkins made more friends in refusing favors than Clinton did in granting them. The two men also differed as much in personal appearance. Tompkins, shapely and above the ordinary height, had large full eyes, twinkling with kindness, a high forehead, wreathed with dark curly hair, and an oval face, easily and usually illuminated with a smile." Professor James Renwick, who was one of his College instructors, writes of Tompkins that "he had the faculty of never forgetting a name or face of any person with whom he had once conversed"; and the author of the "National portrait gallery" describes him "as one of the most amiable, benevolent and true-hearted men who ever lived."

Possessing these qualities and strong political ambition it is not remarkable that Tompkins's advancement was rapid. In 1804 he was elected to Congress, as a colleague of Dr. Samuel Latham Mitchill, A.M. (hon.) 1788, but resigned before the session began, in order to accept an appointment as associate justice of the Supreme Court, to succeed James Kent upon his advancement as chief justice. As a judge he was known for his punctuality, his fidelity to duty, his careful consideration of every fact, however small, his strict impartiality, and for the justice of his decisions. Had he remained longer upon the bench, he would undoubtedly have gained great distinction as a jurist, but the three years during which he held judicial office so extended the popular regard in which he was held that in 1807, when only thirty-three years of age, he was nominated and elected governor of the State. The remarkable popularity which led to his election was due not only to his personal charm and happy faculty of dealing with people, nor to the fact, as Alexander expresses it, "that the qualities of fairness and fitness which Greek wisdom praised in the conduct of life were characteristic of his life," but also to his wide range of interests.

He was deeply interested in education, was one of the founders of the Public School Society, and urged upon the legislature the necessity of more ample provision by the State for schools. While governor he labored assiduously to bring about the establishment of Washington College on Staten Island, and no one can read his correspondence with Bishop Hobart on the subject, without being impressed with the earnestness of his convictions.*

He was also a founder of the New York Historical Society, which owes its existence to a combination of Columbia and Princeton graduates; and he was an enthusiastic Mason, holding the office of Grand Master of the Grand Lodge from 1820 to 1821. His broad humanitarian views are shown by his recommendation to the Legislature that capital punishment be abolished for all crimes except treason and murder, that whipping should be abolished as the penalty for petty larceny, and by his last recommendation as governor, in pursuance of which slavery was abolished in the State of New York on July 4, 1827. The bulky volumes of his correspondence, now in the State Library, show him to have been a man who might well say, with Terence, *Humani nihil a me alienum puto*.

When Tompkins was first elected governor, the relations of this country with Great Britain were greatly strained by the latter's impressment of American seamen, and before he was inaugurated England had published its orders in Council, forbidding all neutral trade with France; Napoleon had promulgated his Milan decree barring all neutral trade with England; and the Congress of the United States had ordered an embargo prohibiting all foreign bound American vessels from leaving United States ports. Tompkins was thus confronted with a serious crisis at the very outset of his administration. The feeling in New York against the embargo was especially strong, since New York was the greatest sufferer, but Tompkins stood loyally by the administration and pleaded for "a magnanimous confidence in the efforts of our national councils" and "for a firm unanimous determination to devote everything that is dear to us to maintain our right and national honor." The legislature and public opinion sustained the governor's views, but

* History of Columbia University, p. 103

it was not until he had been twice reelected, in 1810 and again in 1813, upon the breaking out of the war with England, that Tompkins had opportunity to demonstrate the true quality of his patriotism and the extent of his capacity as an administrator. The crisis demanded both qualities in the governor of the State of New York, for the general government had neither men, money nor credit, and New York was the pivotal State. The whole country was in jeopardy, but it was evident from the outset that New York State must be the principal battlefield of the struggle, and that the State must to a great extent provide its own means of defence.

Governor Tompkins urged the Legislature to advance the funds necessary to supply arms and put troops into the field, but the Federalists were in control and refused financial support. The New York banks also declined to make advances on United States Treasury notes. But Tompkins was indefatigable. His enthusiasm inspired enthusiasm in others and by pledging his personal and official credit, he succeeded in securing advances of a million dollars. In these efforts the governor was nobly sustained by his political rival DeWitt Clinton, who, as mayor, induced the Common Council to borrow money on the credit of the city and loan it to the United States, raised a fund and erected fortifications for the defence of the city. It is interesting to note in passing that the students then in College organized a militia company, known from the color of their uniform as the "College Greens," and aided in building earthworks on Morningside Heights.

Hugh Hastings, the State Historian, in his admirable preface to the "Military papers of Daniel D. Tompkins," published by the State under his editorship, epitomizes the services of Governor Tompkins, at this juncture, as follows:

He was not only Governor of the State of New York, and commander of all the forces of the State, but paymaster, quartermaster, commissary, commander of the Third United States Military District and general disbursing agent for the State of New York and for the United States. During the three years of the war he disbursed more than three millions of dollars, of which one million was for the State and two millions were for the United States. In less than forty days, without assistance and money

from the National Government, he mustered into the field at various points of danger in New York, 50,000 men who were organized, armed and equipped; and in less than sixty days, when the credit of the National Government was absolutely gone, he raised \$1,000,000 for the public service and made himself personally liable for the entire amount.

On the strength of his personal credit, he advanced the money which kept up the Military Academy at West Point, and paid for the manufacture of arms in Springfield, and he continued the recruiting service in Connecticut, while the New England Federalists were not only withholding aid, but actually discussing in convention at Hartford the withdrawal of the New England States from the Union. Tompkins was in truth, as Alexander calls him, "a great war governor. Among civilians most admired for their part in the struggle, Daniel D. Tompkins stood first." There can be no doubt that he was largely instrumental in bringing the conflict to a successful issue.

In the spring of 1815, after peace had been proclaimed, he resigned the command of the Third Military District, to which he had been appointed at the outbreak of hostilities, and President Madison addressed to him a letter of thanks for his "patriotic, active, and able support given to the Government during the war."

Before the close of the war President Madison invited Tompkins to become secretary of state, but the offer was declined, and in 1816 the people of New York again reelected him to the governorship by a majority that attested his widespread popularity. "For the moment everyone seemed to be carried away by the fascination of the man," writes Alexander. "His friends asserted that he was always right and always successful; that patriotism had guided him through the long discouraging war, and that swayed neither by prejudice nor by the impulses of personal ambition, in every step he took and every measure he recommended, he was actuated by the most unselfish purpose. . . . Even Federalists ceased to be his critics"

Higher honors were in store for him, and in April, 1816, he was elected vice-president of the United States, James Monroe being the newly chosen president. The office of vice-president, though more

distinguished than that of governor, offered but few opportunities for the exercise of Tompkins's abilities, and while he filled it with great dignity and with such satisfaction to his party that he was reelected for a second term, he does not appear to have impressed himself upon public affairs at Washington to any marked degree. His reelection to the vice-presidency occurred in 1820, and in the same year he was renominated for governor, but was defeated. He was elected, however, to the Constitutional Convention of 1821, and in a body remarkable for the ability of its members, which included John Jay, and his son Peter Augustus Jay, Rufus King, Nathan Sanford, James Kent, Ambrose Spencer, and many others of unusual distinction, by a vote of sixteen to ninety-four Tompkins was chosen president.

But the later years of Governor Tompkins were embittered by official injustice which was not rectified until long after his death, and presents a pathetic illustration of the ingratitude of republics. Charged by the State Comptroller with a shortage in his accounts, in connection with the War of 1812, amounting, as alleged, to \$120,000, Tompkins claimed that there was a large amount due to him from the State. Both the legislature and Congress took action on his accounts, and President Monroe sent a special message to Congress recommending payment. Congressman McLane in supporting the claims of the vice-president said on the floor of the House: "We all know that at a moment when others were husbanding their funds or dealing them out with a very scanty hand, this man risked everything for the public cause and staked his private fortune in its support. It is to services thus rendered that his present embarrassment may be traced. In consequence of them he now calls on his country, not for charity but for justice."

These views were fully shared by the great majority of his fellow-citizens, but none the less he was denied payment by the State. Judgments were entered against him for the moneys which he had advanced or made himself responsible for in carrying on the war, his household furniture was sold under execution, and his wife and infant child literally turned upon the street. Harassed by his creditors, mortified by his political reverses, and heart-broken by the injustice to which he was subjected, he died on June 11, 1825, in the fifty-first year of his age.

Years afterwards it was discovered that the State was debtor to Governor Tompkins to the amount of \$92,000, and the payment of the debt has removed the only shadow from his memory, but justice so long deferred can hardly be deemed justice, and the treatment which he received from the State serves to bring into stronger relief the personal qualities which made him so beloved and admired as a man, and the unflinching patriotism and self-sacrificing devotion to the public weal, which mark him as the highest type of citizen. He lies in a forgotten and almost unknown grave in St. Mark's churchyard, but the monument which may sometime commemorate his activity may fitly repeat the words of the historian, "His life was pure and noble; he was a sincere lover of his country, a brave and often daring executive, a statesman of high purpose." Obscured as his name has been by the misfortunes of his later years, his *alma mater* may well give it a place among the highest on her roll of honor.

JOHN B. PINE

THE TECHNICAL SCHOOL AND THE UNIVERSITY

DURING the past four hundred years there has been a most significant although gradual development in the university organization. This has been a necessary result of the evolution of knowledge. The earliest continental universities found a reason for their being in the dissemination of a system of scholastic learning which had little to do with the affairs of men. A body of learning based chiefly if not wholly upon certain conventional systems of abstract knowledge like the Aristotelian logic, transmitted with little or no change from the masters of antiquity, constituted essentially all they had to offer to their students. The instruction consisted almost entirely of certain exercises in this intellectual inheritance practically unchanged through the centuries of its transmission. This mental training had essentially no relation to or bearing upon the actual things of human experience, nor had it much effect upon national life or upon any of the varied interests of the community.

In the beginning of the sixteenth century, however, when the dark shadows of the Middle Ages began to disappear before the illuminating influence of a truer knowledge, a remarkable movement began in a contest which has scarcely been closed to this day. The intense struggle between Humanism and Scholasticism began in and around the German universities in the early years of the sixteenth century. The actors in this new culture rejected the old sterile instruction with merciless vigor and displaced it with systems of study touching as closely as possible the human life of those times. It was their open purpose in which they gloried to treat of things as they actually existed, to get as near to the life of the community as the best knowledge would bring them; in other words, to touch human life intimately and at the greatest possible number of points.

Scarcely had the Humanistic movement reached a successful issue, before it was supplemented by the Reformation. Although this great religious upheaval was destined ultimately to aid the Humanistic movement, an intense struggle marked the first stages of their concurrent development. While the ultimate effects of these two epoch-making movements were virtually the same in their influence upon the advancement of knowledge and upon the evolution of the university, the fundamentally different characters of their two great representatives led to intellectual contests of exceeding bitterness. Fortunately, however, their efforts to advance knowledge along different lines created a common spirit of true learning, which has been the living stimulant of university life from that day until this.

During the sixteenth and seventeenth centuries the university may be said to have consisted of the philosophical and theological faculties, supplemented by the faculties of law and medicine. The subsequent extensions of the university throughout the eighteenth century resulting from its closer contact with the things disclosed by experience and its widening influence upon all branches of human activity, were chiefly marked by the strengthening of the two last-named faculties.

Throughout all this period of over three centuries the philosophical faculty was predominant in its position and influence in

the university. It had come to represent a body of more or less abstract instruction covering by far the greater part of the existing field of knowledge, and, it must be said, divorced largely from the real things to which it properly belonged. In the early history of universities it constituted a sort of purveyor of privileged or aristocratic learning ostensibly of better birth than the professional faculties of law and medicine, which had the misfortune to deal with the actualities of human life on which the welfare and safety of communities no less than the rights and duties of individuals are fundamentally based. This conventional class distinction of learning was the real influence or force so completely overcome by the movements of Humanism and the Reformation, and it has bequeathed to us the useless and senseless term "pure" science as opposed to applied science; as if there could be in some way a science politely distilled as an essence of learning separated from the realities with which absolutely all science whatever has to deal and without which no science whatever can exist. A meaningless scholastic philosophy based upon the sterility of mere convention and authority was displaced by an honest and fearless search for the real knowledge which lies at the base of all true learning. The deadening influence of prescribed knowledge gave way to the quickening stimulus of individual power and freedom of investigation in every field of experience. All the professional schools of the university, prominent among them being the modern technical schools, are the fruitful products of this ever increasing and abundant intellectual life.

During the latter part of the eighteenth and throughout the nineteenth centuries the extensions of all branches of physical science so enlarged their fields of application, that the foundations were laid of another distinct and prominent faculty. The great investigators in chemistry, in physics, in biology and in the marvelous combinations and ramifications of those and other affiliated sciences were the pioneers in the service rendered by science to the creation of the industries of the world which have been such potent agents in the extraordinary advancement of civilization during the past one hundred and fifty years. Every addition to scientific knowledge, meaning simply a closer contact with the realities of our

natural environment, has supplied a corresponding field of activity for useful effort and in just that much has enlarged the meaning and the volume of life.

All these practical or useful extensions of technical knowledge have in fact been made possible by the technical work of the university, although many of the greatest investigators and many of those who have been most successful in enlarging useful production have received their individual stimulus and prosecuted their life work outside of the university organization. The university has been the nursery of useful scientific investigation and the influence of its instruction has extended with an ever increasing acceleration far beyond the limits of its immediate environment. The practice of every technical profession is founded upon precisely that quality and kind of knowledge established by investigation and by instruction at those centers of learning which only have been the originators and transmitters of useful knowledge from the earliest beginnings of science to the present day. Although there have been much scientific investigation and remarkable applications of science to human activities by individuals or in communities to whom apparently even the meaning of university work was unknown, the fundamental principles on which the value of the subsequent technical work is wholly based will be found in practically or absolutely all cases to have germinated in the fertile soil of the university.

The initial stages of technical education took form first in the universities of Europe. The subsequent development of that educational work into complete technical faculties is found to have been practically concurrent in both the universities of Europe and America, although the former have precedence in time over the latter by comparatively short periods. These faculties have not always been known by the names of the professional practice for which it is the purpose to prepare their students, but the apparent defect in the continuity of the case is not real. In the earliest university courses of technical study instruction was given in a substantial number of technical subjects under a faculty of broader jurisdiction than that confined to a technical profession, and in some of them that method is pursued even at the present time.

Such courses of study effectively answered their purpose in the early days of the engineering and allied professions, but their administration has generally been advanced by a natural development concurrent with the growth of the professions which they have served, to remarkable groups of technical faculties of such prominence and intellectual strength and with such numbers of students as almost to dominate the true university in some cases, and even to form essentially technical universities in others.

These great technical faculties have been the direct results of the dissemination of knowledge by the university. Even the professor who has boasted that he never wittingly either learned or taught anything useful has been the servant of real learning by extending the limits of scientific knowledge which refuses to be hindered or circumscribed by its narrowest and most erratic votaries. Wherever there has been a seat of learning, from that point has issued a quickening influence which has stimulated the growth of every form of industry. All the great industries on which the prosperity of every civilized nation is based, have originally sprung from the small beginnings which had their initial impulse from some branch of knowledge, acquired in the first instance at the university.

So closely are all forms of knowledge related in their fundamental elements that no one of them can obtain to a state of real growth without carrying others more or less with it. This elementary principle which finds illustrations and the most conclusive proof in every field of educational experience underlies the fundamental organization of the university, and it completely justifies the place of the technical school in the university plan. Further than that, it illuminates in a clear and instructive manner the natural development of an institution of universal learning.

The ramifications of every branch of science reach a great variety of human interests many of which are directly affected by it, while others are more remotely touched. The full significance of every acquisition of knowledge can only be understood or even to a small degree appreciated by realizing the industrial activities or other real interests of the community which it affects. An isolated study of any one technical subject, or of any other subject,

without regard to its relation to other branches of knowledge, would be excessively narrow in its results and probably as valueless as narrow, if indeed such a study be not unthinkable. The greater the number and scope of scientific or technical subjects brought within the range of instruction, the broader will be the whole amount of knowledge acquired, and the more complete and thorough will be the comprehension of any one of them. There is a limit to the number of subjects which can profitably be taken by any student in a course of proposed study, but there can be no question whatever that the instruction in any one subject will be enhanced in value in proportion to its breadth, or its reach into other and related or affiliated subjects.

The more complete the view of the field covered, the more satisfactory will be the student's work in it. In fact it may be stated that the real study of any one part of the field of knowledge consists in acquiring information relating to its effect upon other fields into which it reaches. It is impossible to conceive of any subject of scientific study as an abstraction either from other subjects or from the material elements of experience.

The bearing of all these considerations on the place of the technical school in the university is most direct and essential. In the first place the instruction in any professional school of a technical character is an integral part of the whole body of instruction belonging to an institution of universal learning. It cannot be given so effectively anywhere else as in the organization of which it forms a part absolutely necessary for completion.

The advantages gained by a technical school in a university environment are fundamental; they touch both its technical work and the general educational training which must precede the technical in any adequate course of study of a professional character. An engineering or other technical student pursuing his work in a university system finds himself in a stimulating atmosphere of study and investigation reaching far beyond the limits of his own field. He acquires largely by incidental or even unconscious absorption a broad cultivation by constant contact with active educational work, some of which is more or less affiliated with his and some not. This association is an inspiration to a broader and a

more enthusiastic view of his own work in itself as well as a material enhancement of value of that work by disclosing its relations to other fields of learning, all impossible to attain outside of the university. These conditions give his educational training qualities that not only strengthen and widen his subsequent professional practice but contribute most effectively to his intelligence and usefulness as an educated citizen.

More than this the technical professions now demand of their members for the higher planes of successful practice the same general educational preparation for professional study as that required by the best law and medical schools. Without entering into a discussion as to the relative merits of the educational work done by the small college and by that forming a subordinate member of the university, it is sufficient to say that this part of a well rounded course of professional study harmonizes completely with the university system and is, in fact, an essential element of it.

Both for technical efficiency, therefore, and for the broadest and best educational motives the technical school is bound to find its strongest development in an environment of universal study and investigation.

The university has long since lost the character, if it ever properly had it, of a place where abstractions of learning separated from the things which only give them life are to be dispensed after the manner of instruction to men who are never to deal with the affairs of life. It has come to be an intensely practical working agent. It is effective and worthy of support only in so far as it makes itself felt in the real life of the community. If it is to be a true and real center of instruction it is imperative that it shall carry knowledge into every useful calling, governmental, corporate, or private. The time will soon come, if indeed it is not already reached, when it only can prepare men to administer and extend in a rational and moral way the great industrial activities which at the present time form the foundation of the material prosperity of the modern world.

The true student of the technical or professional school becomes heir to a comprehensive and clear understanding of his duties and responsibilities in his relations to his fellowmen and to the com-

munity. Those duties and responsibilities present themselves to his trained mind in their real proportion. He is neither non-developed nor mal-developed in his judgment of affairs. His university training, especially in the technical school, has taught him accuracy and penetration in the analysis of any proposition confronting him, and that truth and knowledge must be sought with the directness of a plumb-line. Science yields nothing but confusion to the shifty, devious and dishonest inquirer. The fundamentals of morality are the very stepping stones to technical success or professional attainment.

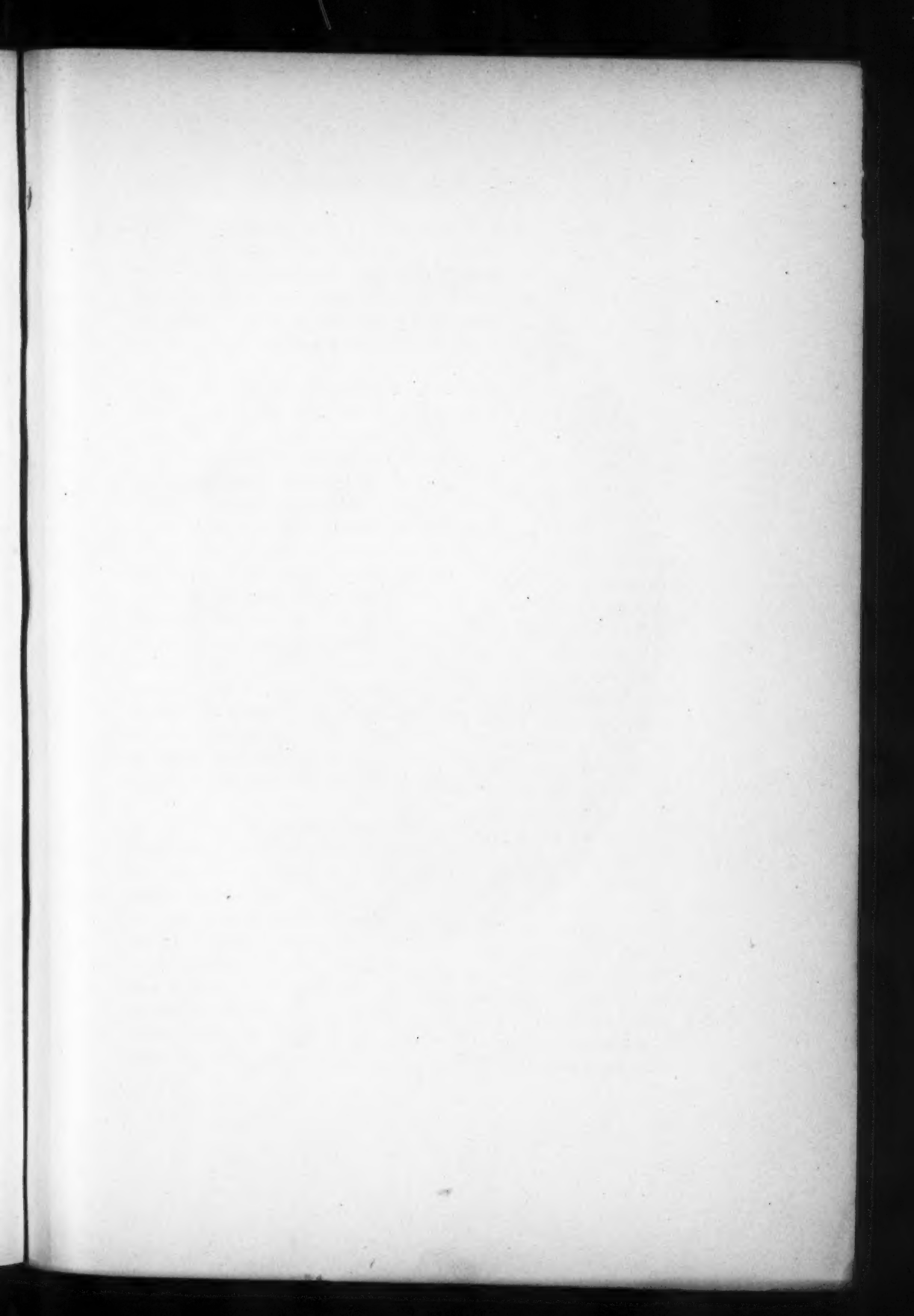
The opportunities offered in the administration of both public affairs and the great corporate interests of the present time, rapidly increasing in number and magnitude, create almost irresistible temptations to prostitute them to selfish gain. The realization that great power, or what has now come to be its full equivalent, great wealth, is a grave and delicate trust, to which selfish gratification in its infinite and seductive variety is abhorrent, comes most naturally and easily through sound knowledge, "the beginning of wisdom." Selfish gratification is a temptation to which he may or may not yield, but his inheritance from the university translates wealth to be a means of accomplishing the highest purposes of life, and saves him from that narrow, common complaisancy of wealth which is the dry rot of character.

In this age of self-appointed erratic and dangerous regulators of society, when an unreasoning and destructive discontent frequently prompts to crude measures whose real purposes is a blind upheaval of the existing order of things, the intelligence and the calm balance of the university man of affairs must be the cornerstones of public safety. His trained mind, taught to analyze and to test by the records of experience no less than by the precepts of science, does not lose its poise before either the shallow plausibilities of the advocates of Utopia or the sinister deceptions of the revolutionary reformer or, what has come to be nearly as bad, by the egoistic and blundering although much applauded strenuosity of the present time. It is not to be supposed for a moment that every subject of university training will issue from its halls the ideal well-rounded citizen, but judgment must be passed upon such matters

in view of their resultant tendencies. A fair and careful scrutiny of the impress made through the professional schools of the university, from the older faculties of philosophy and theology to the modern faculty of engineering, upon the broad moral, governmental, professional and business affairs of the civilized communities of the world conclusively confirms and supports these observations.

The creative or evolutionary influence of the university upon the community is exercised chiefly, and it will ultimately be exercised entirely, through its professional faculties, its faculty of philosophy already having become essentially a professional faculty of teaching, a character which it is bound fully to assume hereafter. This is the highest and ultimately the complete mission of the university. This means with absolute certainty that professional instruction shall be given not by closet professors, but by men who are students in the highest and best sense of the word, profound students not only of the abstract principles of their profession, but of the play and power of those principles upon the affairs of men. This knowledge must be gained by taking their full part in human experience and not by withdrawing from it. Their investigations must be made largely in the practical operations of their professions. In other words, they must be men of affairs as well as students. A living and forceful quality can be given to instruction in no other way whatever but by actual contact with the things encountered in practical experience and precisely in the relations disclosed by that experience.

Some of the professional faculties have already benefited by this quickening and energizing influence of living contact with their professions. The medical faculties are composed largely of eminent practitioners, and it is not too much to say that it would be impossible to give the requisite instruction were it otherwise. It is well known that most serious defects in the present educational administration of the university faculties of law and engineering are due to the fact that too many instructors fail of that true development and broad training gained only by actual professional experience. It may be confidently stated that instruction in professional engineering subjects can not now be given with the neces-





HERMANN SCHUMACHER
KAISER WILHELM PROFESSOR
1906-1907

sary breadth and efficiency without supplementing the imperatively necessary work of the study by extended practical experience. And these observations are not peculiar to the faculties to which they are applied. The time has already come when the professional faculties, and preeminently so those of the technical schools, must be active, living parts of their professions. There is no other way by which they can either properly discharge their own functions or become members of a university organization strengthened and equipped to meet its wide educational responsibilities, which make it one of the greatest conserving and elevating forces of the community.

The technical schools constituting the great modern professional schools of the university are integral parts of it and necessary consequences of its natural evolution. They belong to it historically and naturally. They are professional schools and professional schools not only belong to the university, they are the university.

WILLIAM H. BURR

INAUGURAL ADDRESS OF THE KAISER WILHELM PROFESSOR

IN responding to the invitation of your president to take part in these opening exercises, I do so with some amount of anxiety. Having only just arrived in this large country and not yet being acquainted with the customs of your university life and not yet having a thorough grasp of your language, I fear I cannot do such a distinguished audience the justice which the occasion demands.

Nevertheless I respond with considerable pleasure to your president's invitation and rejoice to have the opportunity of conveying to you the greetings of his Majesty, the German Emperor, of Dr. Althoff, the head of the Prussian department of education, and of our leading and most representative university, that of Berlin, by request of the Rector, Professor Diels. And I also experience a personal pleasure in being able to express my thanks for the privilege and honor of being chosen as the first Kaiser

Wilhelm professor of German institutions and history in Columbia University. This pleasure is intensified by the prospect which this professorship presents to me of coming into contact with American ideas, institutions and life.

It is a source of delight for me to become acquainted with the *United States*. We feel ourselves in many respects related with the citizens of this great republic. We have so many features in common with you in our conditions, our development and character. It is true, we do not spread over the whole breadth of a mighty continent, as you do in the New World; nevertheless we enjoy a fortunate geographical position in the Old World, inasmuch as we live in the very heart of that continent which was the first to reach a high point of civilization. It is true, we have not the almost boundless natural resources with which the United States are favored, but we are favored by nature also. The mineral which has the greatest influence upon the fertility of the soil, potash, occurs in greater quantities in Germany than in all other countries together; no other land in Europe possesses such rich deposits of iron as ours does, and in the production of coal we are in Europe surpassed only by England. It is further true that in the matter of population we come behind your country, still we hold the first place among purely European nations and we have therefore the largest inland market in the world today, next to that of your republic.

Still more important, however, is the similarity in the historical experiences of both nations. The founders of both nations were hardy and strenuous colonists, who had to subdue primeval forests by the sweat of their brow. More than five hundred years ago, when America was not yet discovered, a mighty flood of Teutonic people moved eastward, crossed the Elbe and entered the territory of the Slavic race; there, in the scanty colonial soil of northeast Germany lie the roots of the Prussian State and the German Empire. In like manner, after the discovery of the New World, the Teutonic movement went westward across the Atlantic, and from the barren northeastern shores where the Pilgrim Fathers landed, the power developed which ultimately subdued and civilized the whole of North America. And on both sides of the ocean these

colonists were in course of time compelled to gain their independence and national unity at the cost of bloodshed, and, after the establishment of political unity, both nations developed their industry and commerce with such vigor and rapidity, as is unparalleled in the history of mankind. In consequence, both nations, which are kindred in their origin, have been drawn nearer and nearer to each other, also economically.

Twenty-five years ago Germany came a long way behind France in her trade with America; today Germany, after England, is the most important country commercially for the United States and buys from your country two and one-half times as much as France does. In the same way the United States advanced to the second position in the trade of Germany. Your exports to Germany have, since the year 1889, surpassed those of Russia, Austria-Hungary and Belgium, and now come second only to England. As to our exports to you, the case is somewhat different: While we have become the second best customer for North American products, the United States, which was formerly the best customer of Germany after England, has been forced back to third place.

But apart from this, the relations of these two kindred nations have in the course of time grown enormously in the commercial sphere, and that is all the more important, as Germany—in contradistinction to England, France, Spain, and Russia—has had no political conflict of any consequence with the North American Union. As Frederick the Great was the first to recognize the independence of the States and Prussia was the oldest historical ally of the North American commonwealth, so even today the overwhelming majority of our nation holds to the view expressed in the words of Bismarck: "Of all foreign countries we have most affection for the United States."

But more than the similarities, the very differences between us must eventually form a bond of connection. In contradistinction to all European countries, your republic rejoices in an expanse which reaches almost from the arctic to the tropical region, "a realm wherein are fruits of every zone, airs of all climates." It is only in the large cities with their skyscrapers that you experience a feeling of being cramped at all, not as a nation on the whole.

Under the influence of this vastness of country, this nation of bold, daring immigrants has developed the spirit of enterprise whose astounding and ever new achievements we are never tired of admiring. We Germans, on the other hand, are pressed for room in our country. Nearly twelve times as many people live on each square mile in Germany as in the United States. While you can stretch out on every side, we must make the best of our confined space and are forced even by our geographical position to exercise economy and thrift. While nature herself directs your energies toward external aims and imposes grateful tasks for your practical minds on a grander scale than she has done for any other nation, we, by reason of our very surroundings, are driven in upon ourselves; we have thus, in the development of inner wealth, sought a substitute for the acquisition of outer wealth, which has been in many respects rendered so difficult for us; we have become, in fine, "a nation of thinkers and poets."

For centuries tasks of a scientific character have stood for us in the foreground; they claimed the best strength of the nation and thus enabled us, more perhaps than any other country, to develop scientific methods and traditions of study. Not until recent years—not until the foundation of the German Empire, the enormous growth of our population since that time, and the consequent astounding advance of our trade and industry—did economic tasks begin to usurp the interest and strength of our nation. Only as we solve them satisfactorily shall we be able to continue along the upward path of national development. The contrary is the case with your country. Economic tasks here have stood in the front since the beginning. Never before have such tasks moulded the spirit and being of a people to such an extent. But the more the development advances, the more scientific tasks press themselves upon you along with economic ones. And that is coming to be felt more and more intensely in ever-widening circles of your population. Whereas our development in Germany thus brings with it the necessity of schooling our people more efficiently in economic tasks, you, on the other hand, realize that it is necessary to beautify with science and art the national dwelling which you have erected on the broadest economic foundations. You know that without these

choicest flowers of human civilization no nation can be considered really great. You know that only with the help of science and art can that wondrous and grand task be fully discharged of welding into one united nation the varied elements of many races which seek a home on this side of the Atlantic.

And in another and kindred respect our two nations can supplement each other. We Germans look back over a long period of vicissitudes in our history. It is impossible, apart from our history, to form a true idea of our institutions, our whole existence, our advantages and disadvantages. Definite traditions are everywhere operative in our national life. Their roots strike deep into the past; they have grown up out of conditions which have largely disappeared. It is true that these traditions and customs of every kind contain rich treasures of experience, won by former generations. We owe a great deal to them. They give to our development as a whole and in detail stability, and form the solid foundation on which our social and political life, our army and civil service and educational system are built. To do away with such traditions would be just as foolish as it is impossible. But it is indeed necessary to modify them. For some ballast is a good thing, it makes the ship steady; too much ballast, on the contrary, checks her speed.

In comparison with us, you are not fettered by ancient traditions. The greater part of your land is without historical associations. No memories of former times cast their spell upon the dwellers here; it is the future which wholly captivates the mind. Nevertheless a noble, lasting, progressive civilization is just as little conceivable apart from traditions, as it is apart from science and art. They are the capital which previous generations have gathered for the welfare of posterity; and just as in economic life there is no durable progress possible without capital, so is it none the less true in mental life.

Thus, it seems to me the development of your nation carries with it a further inevitable consequence. The first period, in which each man, looking with joy to the future, full of strength and courage, approaches in his own way to the solutions of the great problems presented by colonization—the first period, I add, must be

linked unto a second and this second has already set in strong and full of promise. In this period it is—at least in my judgment—imperative to develop traditions in the most varied departments of modern life, in order to lead onward safely and to achieve more completely that which individual energy has created. Most especially is that necessary in political life. As President Roosevelt expressed it: “The more a nation develops, the more it must make use of the power of the State.” And so once more we arrive at the conclusion that both peoples supplement each other in regard to the most important tasks of national life. It is true, what has already been said so often, that in the whole world there are no two nations which can learn so much from each other as the German and American peoples.

I am also pleased and gratified for the privilege of learning to know *New York*, where the stranger on arriving is so powerfully impressed by the Statue of Liberty—the symbol of American freedom; by the towerlike buildings—the symbol of the daring and creative spirit of your people; and also by what is perhaps the most imposing memorial of German-American skill, the Brooklyn Bridge, built by Johann Roebling.

With no harbor in the world have we—especially the German Hanseatic towns, and in the first place my native town of Bremen—such close connections. More Germans have landed here than the total population of the Kingdom of Saxony, and forgive me if I remind you that amongst these German immigrants have been men who have contributed not a little to the greatness and glory of your republic; I may mention the names of Schurz, Steuben, Muehlenberg. Year by year more than one-fourth of all the passengers leaving the United States sail from here on the steamers of the two large German shipping companies. Not altogether without justice has it been said that Hamburg, the largest port, and Bremen, the most important emporium for cotton, tobacco and petroleum on the European Continent, maintain almost closer relations with New York than with Berlin. As the port of entry for almost all the immigrants, for nearly one-half the American commerce, New York has—thanks to its situation on the finest of natural harbors and the most navigable of inland water-ways on the eastern coast—

attained the dignity of the Empire City of this country. In international traffic only surpassed by London and immediately followed by Hamburg, it unites the multitudinous threads of the economic life of America. Nowhere else can one gain such a clear and deep insight into the busy life and work of your people as here. The New England States, with their older and calmer development, with Boston-Cambridge as the revered center of their intellectual life, approach perhaps more nearly to our emotional and intellectual temperament; but New York appears to us more peculiarly interesting and instructive, for in this city, quite apart from its economic significance, we are able to observe closely that mighty process of the welding together of so many races into a new member of the venerable family of civilized nations, with the noble charm, the vigorous strength, the passion for achievement and the thirst for knowledge so characteristic of youth.

But I am especially delighted and grateful that I have been selected to lecture as a professor in this *university*.

In Germany there exist only slight differences between our universities. They all, without exception, reflect the whole of our national culture; the local distinctions and differences in age disappear behind the uniform traditions of our university life. Two of the youngest of the universities of Prussia, Berlin and Bonn, are also the largest. To represent the whole science of the world is, in accordance with their old Latin name, alike their task in East or West, whether of more ancient or more recent date.

In a new country where economic problems dominate, that is necessarily otherwise. The highest educational institutions must reflect here the various stages of the great colonizing process. For you in this vast country the chief aim has naturally been not to educate international scientists, but to train as many as possible of the people for the more practical tasks which your environment and destiny impose upon you. That is for us Germans all the more instructive and interesting, the more the great modern economic problems become decisive factors also in the weal and woe of our nation. In Harvard and Yale and in Johns Hopkins we see most of all the dignified and brilliant institutions which combine the mental culture of the Old and New World: They have taken

as their model—so it seems to us at least—the best seats of learning in the Old World. On the other hand, we may regard Columbia University as the ripest and most brilliant representative of that American type of the highest educational institution which has grown up purely in response to the requirements of this new country.

And there is another factor which creates for us Germans the most lively interest in the university of this city. In Germany we have also had the experience, that the attractive power of a large city is highly significant for the university life. Small towns whose life was almost idyllic in its calmness, such as Jena and Göttingen, were formerly counted among the most famous and distinguished representatives of German university life. That has begun to change. Now the large towns attract the students in increasing numbers. About one-fifth of the total number of students come to Berlin alone, and more than two-fifths to the three largest university towns. The same thing seems to be happening in your country and the reason can readily be understood. It is not only the tendency towards concentration which characterizes our era in almost every direction; a certain necessary specialization and division of labor is also revealed therein.

Many branches of study, such as those of philosophy and the dead languages, will always seek in preference idyllic retreats; other branches, on the contrary, depend on their close connection with practical life outside the universities. Not merely from external, but also from internal reasons they press into the cities, where modern life pulsates in all its rich and manifold phases. To this class of subjects belongs, above all, the science which I have the honor to represent. *Economics* has been compelled in the course of time to change its character entirely. Formerly it was a purely abstract science and we younger political economists in Germany still feel that a fundamental theoretical training cannot be dispensed with in the effort to grasp the many new and difficult economic problems of our age, but at the same time we are absolutely convinced that it is just as indispensable to gain, in addition to that merely theoretical training, a concrete knowledge and practical experience of economic life. On this account, too, it gives me great

pleasure to come to this country, which, more than any other, has been determined in its development up to the present time almost exclusively by economic factors and therefore gives the best opportunity of gathering easily and extensively practical observations and experiences in my field of learning.

I prize, however, the great privilege of being, as first Kaiser Wilhelm professor, associated for a time with the life of this city and its university, still more because of another most significant change which has taken place in the science in which I am especially interested. Until quite recently this science, in Germany, concentrated its attention on the economic phenomena presented in our own country; in fact, it might have been called an inland science. It was the marvelous development in our trade and industry in the last decade which taught us to look beyond the bounds of our own land. The teachings of economic life have more and more assumed an international character in a two-fold form. The different nations have come into so much closer contact that most of the great economic problems can today be rightly understood only on an international basis. Questions of trade, industry, agriculture can no longer be satisfactorily treated within the limited experience of one nation alone. And this is not only true of economic problems, but also of economic teachers. No teacher of economics can hold a leading position who does not continually and carefully follow the American economic literature. Consequently, it is for me personally a great privilege to be able to study the teachings which have grown up in the fruitful soil of American economic life and to come into close personal touch with its representatives and students. In this respect I am to a much greater extent a pupil than a teacher.

And while I shall be occupied during my visit in imparting what I know of our German institutions and also in increasing my own knowledge of the American economic and educational system, I earnestly hope that I may in some modest degree contribute towards bringing about a still closer relationship and a deeper spirit of confidence between two nations which have so much to learn from each other. "More important than ought else is the development of the broadest sympathy of man for man." These words of

President Roosevelt apply not only to the various classes within the nation, but also to the relations of nation to nation. I shall endeavor to the utmost of my ability, both during my stay among you and afterwards in my own country, to contribute to the development of a broad and vital and growing sympathy between the two great peoples on both sides of the ocean, those of Germany and America.

HERMANN SCHUMACHER

RECENT PROGRESS IN PHARMACEUTICAL EDUCATION AND LEGISLATION

IN 1905 the State of New York enacted the now celebrated "prerequisite" amendment to the pharmacy law, obliging every applicant for a license to satisfy the Board of Pharmacy that he has graduated from an acceptable school of pharmacy, no such school being "acceptable" unless it require a preliminary education equivalent to one year's work in an approved high-school. This action protects pharmacy against the farther accession of members devoid of school training, and the schools thus receive important support. At the same time, the latter are compelled to struggle against the disinclination of prospective students to qualify themselves as the law requires, a disinclination that rests chiefly upon the extremely inadequate salary of clerks, until recently little larger on the average than the wages of day-laborers in the City of New York. The disposition of these students to leave the State in order to secure their education in schools of lower requirements is restrained by their inability to return here as practitioners.

The influence of this action has proved revolutionary. Although a number of schools already imposed similar or higher entrance requirements, none enjoyed a similar legal protection, and they suffered accordingly. Others were therefore deterred from imitating them, and in most of the seventy-odd schools, there was no adequate entrance requirement. In our own State, the advocates of the advance step had been obliged to struggle for more than five years; first as an unsupported handful, but gaining rapidly

in numbers and strength, and owing their final success to the powerful and generous aid of the State education department. The action of New York was quickly followed by similar action in several important States, while bitterly resented in others. In Pennsylvania a law was passed requiring graduation from a "reputable" school, and her Board of Pharmacy afterward defined "reputable" as standing for membership in the American Conference of Pharmaceutical Faculties. Several other states, desiring to follow New York, but deterred by internal dissensions or a very valid fear of external competition, acted as had Pennsylvania. There exists no national organization for enforcing uniformity, except as to the limited power of the conference above named, but the section on education and legislation of the American Pharmaceutical Association had long performed signal service in influencing and elevating the ideals of those who gave attention to its proceedings. In this section the lowest schools had an equal voice with the highest and the same was true of the boards. Meetings were also open to the representatives of so-called educational institutions whose claims were wholly fraudulent, and to many members who were hostile to any form of professional preparation other than apprenticeship. It will be readily seen that resolutions of this body, even though only of an advisory character, could hardly be expected to strike very high. In 1892 had been formed the conference named above, a loose association of the better schools, designed to improve the educational status as opportunities might offer. The influence of this conference steadily strengthened, and soon it was deemed practicable to establish some mild membership conditions. These were found to stimulate rather than to discourage the desire for membership, and a conservative advance along the line was resolved upon. The influence of the conference upon all external elements became strong, and promoted a general desire among the schools of the country for educational advancement.

In 1904, the conference issued an invitation for boards of pharmacy to confer with it, in connection with the annual meeting of the American Pharmaceutical Association. The invitation was welcomed and a meeting was held that resulted in the organization

of a national association of these boards. The latter had long been looking anxiously for some means of unifying, or at least harmonizing their chaotic license methods, and of removing the intolerable perplexities of interstate reciprocity. Their motives were by no means wholly selfish. They appreciated the need of their own influence in accomplishing educational reforms and the great advantages of harmony in the pharmaceutical domain.

It was under the conditions above set forth that the advocates of the New York method attended the convention of the American Pharmaceutical Association held at Indianapolis, September 2-9, 1906, resolved to urge its advantages upon the conference. This method had not only the ordinary merit of being the result of careful study; it formed an integral part of the professional educational system of the State, which had already organized nearly all of the other professions.

The first discussion occurred in the section on education and legislation on the morning of September 4, on the resolution that the equivalent of one year's work in a high-school should be required before entrance to a school of pharmacy. The opposition was here stronger than was to have been expected anywhere else; yet, after a very free debate, the resolution was carried by a large majority. In the evening of the same day—legislatively speaking, for it really occurred between two and three o'clock the next morning—a vote was reached in the conference, on the same question. The arguments against it were most ably presented, and were very cogent. They were based chiefly on the want of high-school opportunities in some parts of the country. It was proposed to amend by excepting that part of the country south and west of certain lines, but the representatives of some of those States and territories promptly refused to be so stigmatized. Finally a number of the States were specifically named, and students residing therein were excused. Subsequently the number of hours of a pharmacy course were fixed, as well as the ratio of laboratory to other work, and certain exceptions were here also made. In both cases, a reasonable number of years were allowed for the conditions to be met, and with these conditions the requirements were made binding upon the twenty-six schools forming the conference. Not content with

this substantial gain, the conference and the Board Association appointed representatives to act with New York as a committee on syllabus, the object being to secure agreement between the boards and schools upon some minimum qualifications for license, the schools to prepare the candidates at the least to this extent.

In connection with the developments above described, it is important to note the passage by Congress of a pure food and drug law, certain to be followed by similar legislation in most of the States. When supplementary legislation shall have relieved this law of some of its utterly impossible features and some inconsistencies, it will have the effect of setting to work an army of workers in removing the gross imperfections which have so long cursed the American trader and consumer, and this army must be supplied largely from the higher grades of the pharmacy schools.

In view of all these developments, it is fair to regard the past two years as the most important in the history of pharmaceutical education in this country. Not the least gratifying of the events of the period has been the rapid increase in the compensation of pharmacy clerks, an increase that must be not far from one hundred per cent. It is now the imperative duty of the schools to provide a better class of graduates, capable of giving to the public a service that is worth the more liberal compensation.

H. H. RUSBY

LIBRARY EXTENSION

IN the annual reports of the librarian of this University, and in sundry papers read before the National, State and City Library Associations and appearing in part or entire in the library journals of the country, reference has been made to the necessity of specialization in the libraries of every large city, especially in those of a city like New York: the present and future output of all forms of literature, the demand for shelf-room and storage, and the conditions of successful library administration, being duly considered.

Those who are interested in this subject, either as library officials

or as scholars and investigators, know that the foundations of several highly specialized libraries have already been laid in this City. Comparatively few, however, know just how far this work has gone, what its promise for the future may be, or how far such material is available to scholars and students. It is thought timely to place this information somewhat in detail before the officers and students of Columbia University, through the pages of the *QUARTERLY*. For much which follows full and grateful acknowledgment is immediately made to Mr. George Watson Cole, Mr. Charles Alexander Nelson, and Mr. Arthur Elmore Bostwick—whose excellent work is the handbook of the New York Library Club, with its list of libraries in Greater New York.

Of course, university people are already aware of the fact that the New York Public Library—the Astor, Lenox, and Tilden foundations, and all branches—is freely open to all comers. Not much of interest to university workers will be found at branch libraries, but the united collections which will soon be placed in the great central building at Forty-second Street and Fifth Avenue contain much of extraordinary value. The Lenox has very complete and extensive collections on American genealogy and local history, American and geographical literature printed before 1800, American newspapers before 1800, European fifteenth century books, manuscripts, some three hundred atlases, many of which are of very early date, music, a Shaksperian collection of something more than three thousand volumes, together with two art galleries and many rare prints, books, maps, etc.

In the Astor will be found some five hundred volumes and ten thousand pamphlets on Dutch history, a large and valuable collection on economics, finance and banking, a Hebrew collection of something more than six thousand volumes, nearly four thousand volumes on mathematics, and very complete collections concerning naval history, Oriental literature (except Hebrew), railway history and administration, Slavonic literature, sociology, pauperism and criminology, sports and pastimes, etc.

In addition to these opportunities, the libraries of a large number of societies, clubs and other similar organizations in this city are open to university workers, on personal application only, for

reference work within each library. Among these the library of the American Institute of Electrical Engineers has at least eight thousand volumes on electricity exclusively, books of both theory and practice. The American Museum of Natural History has made a remarkable collection on ethnology, and voyages and travels; and includes the Elliott library of ornithology, the Jay library of conchology, the Edwards library of entomology, as well as the library of the Ecumenical Council of 1900. The American Society of Civil Engineers owns nearly fifteen thousand volumes and more than twenty thousand pamphlets. The Brooklyn Institute of Arts and Sciences supplements its museum collections with twenty-five thousand volumes. The Cathedral library, under the wise and energetic direction of Rev. Dr. McMahon, has brought together a very complete collection of books in every department of Roman Catholic theology, literature, and history, as well as many Roman Catholic periodicals in English and in other languages. At the Charity Organization Society will be found a small but exceedingly valuable library, appreciated by all workers in practical sociology. Cooper Union has at least forty thousand volumes, including a large number relating to the early history of New York City. A valuable library on life insurance is maintained in the Equitable Building, especially rich in insurance books of the sixteenth and seventeenth centuries, with complete sets of insurance reports of more than twenty States and more or less complete sets from the remaining States of the Union, and of peculiar interest to persons looking up the history and incidents of great fires, storms, wrecks, plagues, epidemics and earthquakes. Those interested in foreign missions and in descriptions of life in remote countries, will find some eight thousand volumes in the Foreign Missions library and its museum. The general Society of Mechanics and Tradesmen has brought together more than one hundred thousand volumes, for circulation as well as for reference. The highly specialized library of the Mechanical Engineers Association has more than six thousand volumes and three thousand pamphlets in mechanics and allied sciences. Works on art and archæology are available at the Metropolitan Museum, with material illustrations in every gallery. The New York Academy of Medicine has extraordinarily complete and

valuable collections. There is an excellent working library at the Bronx Botanical Garden, supplemented by the museum and the conservatories. At the General Theological Seminary will be found one of the most extensive collections of Latin Bibles in the world, as well as a very complete section of Patristics and one on the Councils. The Jewish Theological Seminary has a splendid collection of early manuscripts, and the Union Theological Seminary has very complete collections on hymnology, Westminster and Puritan literature, Patristics, Roman Catholic theology, and Greek texts of the New Testament.

In addition, many libraries of the City, not generally available, are open to officers and students on introduction and commendation by the librarian of Columbia or by any member of the societies maintaining such collections. Among these may be mentioned the library of the American Geographical Society, rich in voyages, travels, transactions and bulletins of geographical societies; of the Long Island Historical Society, specializing in American local and family histories and genealogies; of the New York Society Library, with its remarkable collection of early newspapers and Americana, especially concerning New York; of the American Numismatic and Archaeological Society, a valuable and interesting collection of coins and medals; the remarkable collection brought together by the Hispanic Society of America under the vigorous and generous leadership of its president, Mr. Archer Huntington; the collections of the Century Association and Authors Club; the Mercantile Library, which among other treasures contains the Tomlinson collection of manuscripts relating to New York during the American Revolution; the library of the New York Genealogical and Biographical Society, devoted to genealogy and local history; and of the New York Historical Society, one of the largest special collections in this country relating to American local history and genealogy, particularly strong in American newspapers prior to 1800, and in important American historical manuscripts.

Exclusive of the strictly public libraries, here are more than a million volumes and several hundred thousand pamphlets, nearly all carefully selected by those who are expert in the various fields covered; a remarkable and satisfactory showing, not equaled by any other city in the country.

With increasing accumulation of material resources in the hands of the members of these various organizations, with which to add to these collections and to increase the efficiency of administration, and with increasing interest in the various fields thus exploited, it is safe to predict that passing years will find these libraries enlarged and enriched beyond the most lively expectations of those who today are directing them. Nor is it too much to add that as Columbia is and doubtless always will be well represented on the roll of both members and officers, the relations of this University to all these organizations will become more and more intimate and satisfactory each year.

In addition to these local facilities, the University has long maintained an inter-institutional loan system, the service of which is constantly increasing and improving. During the last academic year Columbia borrowed two hundred and thirty volumes, from ten libraries, including the National Library at Washington. Harvard, Clark, Yale, Princeton, Pennsylvania, Johns Hopkins, and Cornell are the universities with which, naturally, Columbia has the greatest intercourse: and our officers and students are peculiarly indebted to the large-mindedness and courtesy of library officials in the institutions named. Care is always taken not to abuse this liberality, and under existing regulations these loans are always institutional, never personal: and must be cared for through the respective libraries. Columbia loans, of course, in turn, sending out last year two hundred and seventy-six volumes to fifty-one libraries in twenty-one different States, as far west as California, as far south as Florida, and as far north as Vermont. This does not include several thousand volumes loaned for special use in the various institutions of Greater New York, because in most instances these latter loans have been charged to the individual accounts of officers of these institutions, many of whom as graduates of Columbia or members of its present teaching staff are entitled to draw books on their individual accounts.

It is entirely within bounds to say that with the exception of exceedingly rare and valuable books, there is scarcely any title on the shelves of the institutions named above which is not available to officers or students of this University on request.

It will be seen, therefore, that the means of supplying all the demands of both officers and students of Columbia are exceptional in every respect. Both in quantity and quality, in expert judgment used in selection, and in general availability, there is little if anything more that can be suggested. That the appreciation by both officers and students of these privileges and opportunities is constantly increasing, is daily manifest to those who know anything of the details of the intellectual activity of Columbia.

JAMES H. CANFIELD

SOME REFLECTIONS ON THE GROWTH OF COLUMBIA COLLEGE*

IN the last fifty years three fundamental and notable changes have been effected in Columbia College, one of them taking nearly a third of a century to accomplish, the second about ten years and the third less than a lustrum.

In 1857 the Trustees adopted a statute outlining a comprehensive system of university instruction and making a tentative coordination of collegiate with university courses. The statute was partially, and very imperfectly, put into operation at the time, but resulted, nevertheless, in a considerable improvement in the academic curriculum and in the attendance of students. Its provisions required the labors of the great educational missionary, Dr. Barnard, to quicken them into life and enable them to transform the institution. Dr. Barnard labored most faithfully for twenty-five years and accomplished substantially the great object that he had at heart. At the end of his term, in 1889, he had not created a university but he had brought into being many of the elements of a university; so that the gathering together of the results of his labors, and the putting of them into proper relations with each other, formed a chief part of the early labors of his successor. The university organization, set on foot in 1890, proceeded with striking rapidity and success, and in 1896 the Trustees recognized the practical results by giving the institution as a whole the name Columbia

* See COLUMBIA UNIVERSITY QUARTERLY, March, 1905, VII, 169-176

University. In 1897, the University moved to its present noble site on Morningside Heights, and opportunity was thus afforded to give to the new university organization a true university life.

In the course of the changes noted above, the College, as distinct from its associated schools, suffered a partial eclipse; the attention of the public and, in a good degree, of the responsible authorities of the College, being principally directed to the development of the higher education and, later, to the swiftly moving reorganization, the establishment and extension of professional and more or less specialized forms of instruction. President Butler in 1901 began his timely and very admirable work of giving, or rather restoring, to the College its distinct and proper place in the general educational scheme. This involved, among other things, the closer articulation of the several parts of the University and, in particular, a reconstruction of the academic curriculum from the college point of view. Simultaneously with the labor to these ends proceeded the effort to infuse into the College, officers and students, a true college spirit and its consequent enthusiasm; he projected, and has now secured, dormitories for College students and, near them, on a site apart from the buildings devoted to professional and graduate instruction and facing what is destined to be the College quadrangle, a fine and ample College Hall confined in its use to College men. The reconstruction of the College program of study, after close attention and discussion for two years, was concluded in January, 1905, by a unanimous vote of the faculty, thus completing the third of the changes to which reference has been made.

Columbia College has never as yet risen to the numerical dignity of a large college—I believe it now on the way to adding that dignity to others which have always distinguished it. Each of the three fundamental changes was followed by a growth in the number of students. The first of them, in the long period of its accomplishment, witnessed many fluctuations, for divers reasons, but yet, from the time of the statute of 1857 to the close of Dr. Barnard's presidency in 1889, the attendance increased by sixty-two per cent. With the reorganization under President Low, and during his incumbency of twelve years, the number of College students more than doubled, the increase being especially noticeable after removal

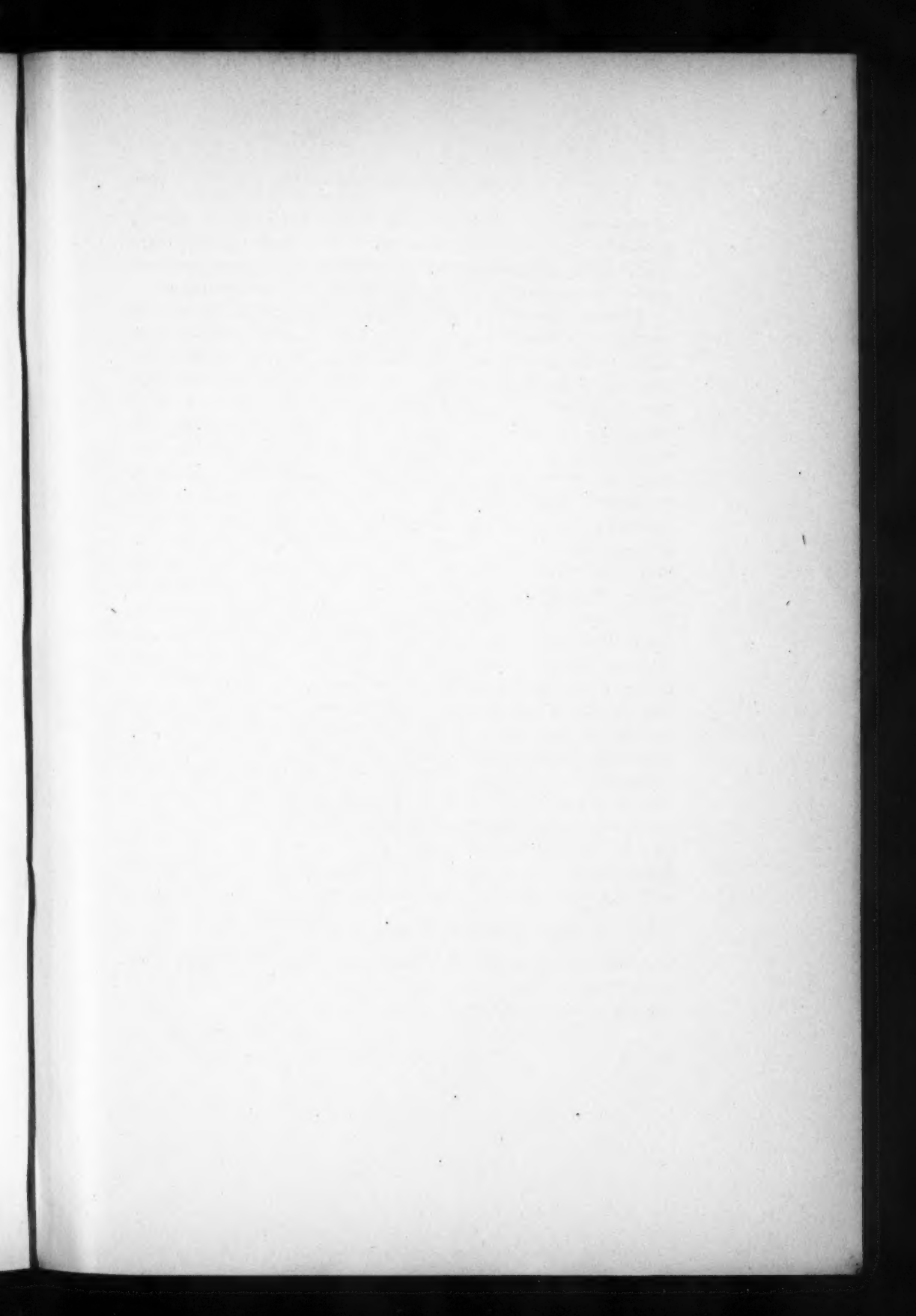
to the present site. Since President Butler took charge in 1901 the number of students has increased from 476 to about 650 (the registration is not yet complete) for the present academic year, and there is every evidence of the increase continuing at an accelerated rate.

I think it doubtful whether the objection to the continuance of the American college not infrequently made, that the people at large had lost their belief in the advantages of a collegiate education, was ever true in the sense in which it was made. There was for a long time much and a growing dissatisfaction with the failure of college authorities to utilize the experience of years in intensifying collegiate training and shortening the period of it, to take, in their curricula, so little notice, or notice at the expense of the college, of the rapidity with which learned professions and occupations were multiplying and requiring special and somewhat prolonged preparation, and of the increasing exactions of the professions of law, medicine and the like—in short, their failure to incorporate into the course of study so little of the spirit of the time. The belief in the advantages of a collegiate education was not thereby destroyed, but the conclusion was regretfully arrived at that the course was too long, too far removed from daily life and its requirements, and, consequently, for the results attained, too expensive in both time and money. The Columbia College scheme, as now adjusted, was intended to meet, and from all indications has successfully met, the reasonable dissatisfaction of the general public with the conduct of collegiate education, and, while retaining and emphasizing in that education its essential and most advantageous features, has made it more directly serviceable to those students who seek a professional or other learned occupation, as well as to those who propose to themselves the lives of scholars: it satisfies the ethical and the practical reasons in favor of collegiate training.

Omne tulit punctum, qui miscuit utile dulci—

and so I venture to say that the growth of Columbia College is on so rational and secure a foundation that it is likely to continue steadily from year to year for many years to come.

J. H. VAN AMRINGE





EDMUND HOWD MILLER
CLASS OF 1891, SCIENCE

EDMUND HOWD MILLER

Edmund Howd Miller, professor of analytical chemistry and assaying, died of typhoid fever, November 8, 1906, at the Nyack Hospital, Nyack, New York, in his thirty-eighth year. Professor Miller was one of our foremost teachers of analytical chemistry and a most valuable member of the educational staff of the University. This sudden cutting down of a strong man in the prime of life and at the height of his powers is inexpressibly sad. His loss falls heavily not only upon his family and friends, but also upon the profession and the University, to which he gave the best years of his life. In his own chosen field of mineral analysis he had no superiors in this country and but few equals. He was an energetic investigator and a very hard worker, with a wide horizon and an exceptionally clear vision, who saw immediately the crux of any problem submitted to him and attacked it with characteristic directness and vigor. A man of few words, what he had to say was invariably straight to the point and showed the result of careful thought. As head of the largest division of the work of the school of chemistry, he demonstrated such conspicuous executive ability that it was evident, even to the newest student in the laboratory, that there was a strong and steady hand at the helm. No man played a larger or more important part than he in bringing the school of chemistry to its present efficiency, while his services as chairman of the committee on admissions of the schools of applied science were of unusual value to Columbia. In all that concerned the University, his influence was ever exerted in the direction of establishing and maintaining high standards of scholarship.

Professor Miller was born at the home of his grandparents in Fairfield, Conn., September 12, 1869, son of George Mason Miller and Bertha Osgood Miller. At the time of his birth, the home of his parents was in New York, which they soon left to settle at West Nyack, N. Y., where they are still living. He evidently inherited his taste for chemistry from his father (a classmate of Dean Van Amringe), who was for a time an officer in the department of chemistry. For five years he attended the Cutler School in New York City, then studied for three years with a pri-

vate tutor, and was admitted to Harvard University in 1886. The following year he entered the school of mines of Columbia College, taking the course in analytical and applied chemistry, and was graduated with the degree of bachelor of philosophy in chemistry in 1891. Naturally endowed with a splendid physique—six feet two inches tall, and broad-shouldered in proportion—he won many athletic contests in his student days, his most conspicuous success being as anchor of the famous tug-of-war team that held both the intercollegiate and national championships for two years. During the summer of 1891 he was employed in the laboratories of Messrs. Ricketts and Banks, and acted also as chemist for the Arlington Manufacturing Company. In the fall he returned to Columbia as assistant in assaying. He not only discharged the duties of this position with marked ability and success, but he also found time to pursue advanced work in chemistry, for which he received the degree of master of arts in 1892 and that of doctor of philosophy in 1894. In the latter year he was advanced to the grade of tutor in analytical chemistry and assaying, which position he held until 1897, when he was made an instructor. In 1901 he became an adjunct professor and in 1904 was made full professor of analytical chemistry and assaying. He was put in charge of the work in quantitative analysis and assaying upon the withdrawal of Professor P. de P. Ricketts in 1899, to which was later added qualitative analysis also, so that at the time of his death he was directing the instruction in all branches of analytical chemistry.

His most important investigations were concerned with the metals of the platinum group and their alloys, with ferro-, chromi- and cobaltcyanides, and with analytical methods and assaying. Some of his best work was published in the names of his students. In addition to numerous articles in the *School of Mines Quarterly* and in the various chemical journals, he wrote the following books: "Notes on assaying" (with P. de P. Ricketts), 1897; "The calculations of analytical chemistry," 1900; "Quantitative analysis for mining engineers," 1904.

He was a member of the American Chemical Society, vice-chairman of its New York section in 1902-3, its chairman the following year and vice-president of the society, representing the New

York section on the council of the society; member of the Society of Chemical Industry and a member of the executive committee of its New York section; fellow of the Chemical Society (London); member of the American Institute of Mining Engineers, and of the Chemists' Club; a charter member of the Columbia University Club and for some time on its committee on admissions; a member of the Alumni Association of the Schools of Science of Columbia and for two years one of its board of managers, much of the success of the meetings of this association in the past few years being due directly to his labors on the committee on meetings and to his popularity with the alumni. He was also a member of the societies of Tau Beta Pi and Sigma Xi. At the approaching winter meeting of the American Chemical Society and the Association for the Advancement of Science, which is to be held in New York City during the Christmas holidays, he was to have acted as chairman of the section of inorganic chemistry.

On June 11, 1898, he married Mary McWhorter, at Nanuet, N. Y. His wife died suddenly on April 17, 1905, and he never recovered from the blow. Although to all outward appearances much the same as usual, save for increased reticence and an evident avoidance of society, the burden of his grief weighed heavily upon his spirit. In addition to this, his once robust constitution had been steadily undermined by overwork and lack of much needed physical exercise, so that he was in no condition to resist the attack of so dreadful a disease as typhoid-fever. He is survived by two small children, as well as by his parents, a brother (S. O. Miller of the department of engineering-drafting), and a sister.

MARSTON TAYLOR BOGERT

THE NEW SECRETARY OF COMMERCE AND LABOR

IN the selection of Oscar Solomon Straus for the post of Secretary of Commerce and Labor, President Roosevelt has chosen for a place in his cabinet an honored son of Columbia. A graduate in arts in 1871, and in law in 1873, Mr. Straus received his training, both academic and professional, at Columbia; and he was one of the alumni, eminent for learning and for achievements, upon whom his *alma mater*, on the celebration of her one hundred and fiftieth anniversary, conferred the degree of doctor of laws.

In previous numbers of this publication, I have recounted some of the notable contributions of sons of Columbia to political science and to the public service.* Beginning with Hamilton, Jay, Gouverneur Morris, and Robert R. Livingston, whose activities cover the Revolutionary times as well as the subsequent formative period of American constitutional history, the roll of those who have won distinction in the various walks of public life is long and illustrious. Since 1877, however, when Hamilton Fish, after serving through the two administrations of President Grant, resigned the portfolio of Secretary of State, Columbia has had no alumnus in the President's official family. She is glad to be represented again in that great national executive council.

The exceptional qualifications of Mr. Straus for the position for which he has been chosen have been universally recognized. To a judgment remarkably sound and sagacious, he unites executive capacity of a high order, while the breadth of his sympathies is attested by the extent and variety of his interests. A lawyer, merchant, and diplomatist, he has achieved unusual success in each field of endeavor. His connection with the public service began in 1887, when he was appointed by President Cleveland as minister to Turkey. In this difficult mission, which he held for two years, he so discharged his duties that, in 1898, when, owing to various causes, the relations between the two countries had become exceed-

* See COLUMBIA UNIVERSITY QUARTERLY, June, 1899; October, 1904

ingly complicated, he was requested by President McKinley to return to Constantinople, where, by his tact, his firmness and his personal influence with the Sultan, he effected an adjustment of various disturbing questions. And he left behind him, among the members of the diplomatic corps, a reputation for ability which has not been surpassed by that of any other American representative at the Ottoman capital. In 1902, President Roosevelt designated him as successor to ex-President Harrison as a member of the permanent court of arbitration of The Hague.

Mr. Straus's public services have not, however, been wholly or perhaps even chiefly official or governmental. In various public organizations he has borne a leading part. As president of the New York Board of Trade and Transportation, of the American Social Science Association, and of the National Primary League, he has given ample proofs of his public spirit, while his deep interest in the perplexing questions that affect the relations of capital and labor is shown by his activity in the organization of the National Civic Federation. Of this body, of which he is vice-president, he was one of the most influential founders, and he has been one of its most generous and untiring supporters. He has also taken a leading part, during the past year, in the founding of the American Society of International Law; and he is known both in the United States and abroad as one of the most faithful and effective champions of the cause of international arbitration.

It is seldom that a person, so much preoccupied as Mr. Straus has been with public and private interests, finds time for authorship, but, with a disposition naturally studious and an aptitude for letters, he has won an enviable place as a writer of force and originality. His best known works are "The origin of republican form of government in the United States" and "Roger Williams, the pioneer of religious liberty," which were respectively published in 1886 and 1894. He has also published occasional papers on subjects of general interest, such as the reform of the consular service, and citizenship.

I may fitly conclude this brief sketch by saying that, in choosing Mr. Straus for a place in his Cabinet, President Roosevelt has gained a wise counselor, and the public a tried and valuable servant.

JOHN BASSETT MOORE

THE TENTH INTERNATIONAL GEOLOGICAL CONGRESS

AT the meeting of the American Association for the Advancement of Science, held in Philadelphia in 1876, the suggestion was made by a number of American and Canadian geologists that an international geological congress be established, and Professor Newberry of Columbia was appointed a member of the committee to effect the organization. Correspondence with geologists in other countries brought favorable replies, so that two years later the first meeting was held in Paris. A formal organization was adopted, French was made the official language and the "*Congrès géologique international*" was successfully established. Since then nine additional sessions have taken place, as follows: Bologna, 1881; Berlin, 1885; London, 1888; Washington, 1891; Zurich, 1894; St. Petersburg, 1897; Paris, 1900; Vienna, 1903, and Mexico, 1906. For the fifth congress (Washington, 1891) Professor Newberry was chosen president, but the election involved a tragic element in that the crowning honor of a long life devoted to science came too late for its recipient to enjoy. Already incapacitated by his final illness, Professor Newberry was forced to send his greetings to the delegates from a quiet summer home on Lake Superior.

The tenth congress which has just closed in the city of Mexico, proved to be one of the most satisfactory and enjoyable in the long series. No country the world over affords material of greater interest to the scientist. The lofty snow-clad summits of the great extinct volcanoes, which form so large an arc in the skyline around the national capital, bring home to the observer the irresistible natural forces but recently extinct. The still active cone of Colima proved not too far for an excursion before the sessions opened; and the towering summit of Orizaba, the most elevated point in North America south of Alaska, could be reached in a three days trip during the meetings. The volcanic phenomena are, however, but part of the attractions. Historic silver-mines presented to the

delegates the phenomena of mineral veins on a very extensive scale. The copper-mines of later development are of even larger dimensions, while gold has been sought and won by both ancients and moderns. In the ruins of Mitla the archaeological members encountered material of altogether exceptional importance. The students of structural geology were both astonished and delighted to find in northern Mexico, especially between Monterey and Saltillo, mountain ranges with folds, upright, recumbent, overturned and fan-shaped, not yielding in any respect to the classic ones of the Alps. Because of the lack of vegetation and snow in this arid climate all stood out with remarkable clearness. In some of their outlying spurs a wealth of fossils rewarded the palæontologists. And finally wherever the delegates went, there was the constant charm of a country with a most romantic history; with a baffling past and a lost type of civilization; with a later record of heroic struggles for independence and autonomy; and a present of material development, which is proceeding by leaps and bounds. Everywhere, too, there awaited us delightful hospitality, administered with a courtesy and thoughtfulness which commanded our instant and grateful response, whether from President Diaz, or from the officials of the smallest towns.

After several preliminary excursions the sessions were opened on September sixth by President Diaz in the assembly hall of the Minera, or historic School of Mines of Mexico. Once officially begun, the subsequent meetings were held in the beautiful new building of the Mexican Geological Survey, or *Instituto Geologico*. The director of the survey, Señor J. G. Aguilera, was elected president of the Congress, and the sub-director, Señor E. Ordoñez, secretary. One of the three assistant secretaries for the United States was Heinrich Ries, '92 S, Ph.D. '95, now professor at Cornell.

The sessions were held on alternate days until they closed on September 15. The intervening days were devoted to excursions to points of special geologic or archæologic interest in the environs of the city. Besides the papers on miscellaneous subjects, one day was devoted to a discussion of the variations of climate in past geologic time and another to the problems of the formation of the ores. The first led to a review of the causes of the several glacial

periods in the past and to the whole question of glaciation in geologic time. In the end two days were necessary in which to satisfactorily cover the ground. The subject of the ores also filled more than one day, the topic being of special interest in a mining country like Mexico. Among others, papers were presented by Walter H. Weed, '83 S, until recently of the U. S. Geological Survey, and by the writer.

At the conclusion of the regular sessions one hundred and twenty-five of the delegates in two special trains were taken on a three weeks' trip through northern Mexico. The party covered some three or four thousand miles and saw a vast amount of material of scientific interest. The excursion started on the night of September 15, and made its first stop on the morning of the sixteenth, the national holiday on which such dire results to foreigners had been prophesied. In the midst of thousands of people assembled to welcome us, we left the train at the little city of Santiago, in the beautiful fertile valley of the same name, in the State of Guanajuato, and neither at this time nor on any subsequent occasion did we receive other than the most courteous treatment. In all the larger mining districts, quite without exception, the writer found old graduates of the "School of Mines," both Mexicans and Americans, oftentimes in positions of great responsibility and trust.

J. F. KEMP

EXHIBITION OF ILLUMINATED MANUSCRIPTS

AN exhibition of illuminated manuscripts, loaned by Mr. J. Pierpont Morgan, was held from October 15 to November 10, in the bibliographical room of the Library. More than twelve thousand visitors were thus attracted to the campus, of whom many came from neighboring cities. The exhibit proved to be the most popular ever given under the auspices of the Library; indeed, it is safe to say that it was the most important display of illuminated manuscripts ever made in this country. Ten centuries of the art of illumination were represented, Europe's mediæval decadence and Europe's renaissance finding eloquent expression.

Perhaps the greatest prominence attaches to a breviary, a masterpiece of the highest order, which has never before been described, and which seems to be closely related to the Grimani breviary—the most beautiful illuminated manuscript in existence. The Morgan breviary is evidently the predecessor of the Grimani, and obviously illuminated by the same hand. Not only is the technique of each strongly similar, but a number of miniatures, identical in composition, appear in both. Another Flemish manuscript, which the writer is tempted to ascribe to the same school, is a small book of hours of the Blessed Virgin, illuminated in all probability in Bruges about 1490. It contains twelve large and twenty-three small miniatures of unrivaled delicacy.

The collection of manuscripts written and illuminated in France was most comprehensive; the earliest being a codex of the Gospels, written in the neighborhood of Tours in the eighth century, and the latest a French masterpiece of calligraphy and illumination of the end of the seventeenth century. Here belong also a Life of Christ from about 1100, and a French book of hours from the year 1200.

Among a few remarkable English manuscripts were the English Huntingfield psalter, executed about 1170; a thirteenth century English psalter—far superior to continental manuscripts of the same age—belonging to William Morris and containing his enthusiastic description of the volume; a rather peculiar text-book of zoology and cosmography, or a "Beastuary," as this manuscript of 1170 is appropriately named, with one hundred and six miniatures; and a very remarkable hymn-book, written in Gloucester about 1430.

The fifteenth century French and Italian manuscripts were very beautiful. The universal histories of Jehan de Courcy and Orose—large folios, with superb illuminations—deserve special mention. Both manuscripts were once the pride of the Ashburnham collection. Then there was an enormous book about bucolic work and pleasure by Pierre de Crescences; and a French collection of sayings of old philosophers, with forty miniatures of great artistic merit. Many of the texts once belonged to royalty. A Bible written in minuscules about 1200, and illuminated with one hundred and forty small miniatures, was the property of Philip II, whose arms are impressed

upon the covers. Another beautiful little volume, a book of hours with excellent miniatures, was the property of King James II. Other books of hours belonged to Louis XI, Louis XIII, Philip, Duke of Orleans—the Regent. A sixteenth century Life of Christ was especially written for Francis I. The first miniature in this represents the French king accepting the book from the illuminator and presenting the latter with a purse.

The latest manuscript on exhibition was a superb production written and illuminated by Patel, Jary, and Le Brun, containing four devotional treatises written for Anne d'Orleans, the Duchess of Montpensier. It certainly is the best the seventeenth century could produce. The Attavantes, the Gerards, the Memlings, the Clovios were then dead, and their art forgotten, never to be revived.

VLADIMIR G. SIMKHOVITCH

E. H. M.

But yesterday we saw him face to face,
Colleague and comrade, gentle, modest, wise;
In vain today in his accustomed place
We wait to win a welcome from his eyes.

Be his the happiness and ours the tears!
He hid a bitter sorrow in his breast;
Now comes the end of all his lonely years,—
God, lead him home to Her and give him rest!

F. D. S.

EDITORIAL COMMENT

In an address on "American universities" which President Eliot delivered at Yale in November, 1905, he discussed at some length the very marked tendency of American colleges and universities to place **Alumni Representation** the power of administration to a great extent in the **in College Government** hands of their graduates, and remarked that it was so natural and so proper to give some influence over the fortunes of a college or university to the body of its graduates that the tendency was certain to make itself felt more and more. Harvard was the first institution to give representation to its alumni in one of its governing boards, and the latest to give its alumni similar recognition is the Massachusetts Institute of Technology.

The last number of the *Technology Review*, published by the Institute, contains an extremely interesting and thorough statistical study of the various systems of electing trustees, which are now in operation in seventy-three representative colleges and universities. The facts adduced seem to justify the writer's assertion that "some participation of alumni is almost universal in American college government today," since it appears that out of the seventy-three colleges investigated, only seven are without it. In forty-two colleges the alumni are formally represented in the government, and in twenty-four the governing boards are largely composed of alumni. As to the latter class the writer remarks: "This, however, is but the participation of individuals, not alumni representation, and does little to conserve the alumni interest, unlike that formal representation by representatives chosen by the alumni themselves."

The more usual plan is to allow the alumni at large to elect representatives by ballot, the vote being cast by mail, but in several instances the alumni nominate and the trustees elect. At Dartmouth, for instance, where the charter provides for a self-perpetuating board of trustees chosen for life, the trustees invited the alumni to "nominate" one candidate every year with the tacit understanding on the part of the trustees that they would elect such nominee, and with the understanding on the part of the nominee that he would resign at the end of five years. By this means the alumni are given five representatives, each of whom serves for five years. It is "reported that the plan works admirably."

As regards the length of term, the writer continues:

The term of office of alumni representatives is usually three to six years. Compared with election for life, this short term has many advantages. The short term permits of bringing to the service of the college many more of the strongest of her sons. By the wider distribution of representatives which this greater number makes possible, many more of the alumni may be kept in touch with the college through a member of the government personally known to them. The short term makes representatives responsible to the alumni who elect them, in that they need not be returned unless they have served the college well. This makes them more truly alumni representatives, and furnishes an incentive for the alumni to watch their representatives' work. Finally and not the least important, the short term involves regular and frequent balloting, itself an effective agency for keeping the alumni interest keen. In thirty-three out of forty colleges the representatives are chosen for short terms.

President Tucker of Dartmouth also has something to say on the subject of alumni representation. In a recent address he states it as his opinion that

A fourth condition affecting incidentally the administration of the modern college is the incorporation of the alumni through their authorized representatives into the governing board. Alumni representation is in some form characteristic of every college which is self-governed, and it is beginning to find a place in institutions governed by the State. Representation on the governing board changes the relation of the alumni from that of sentiment to that of responsibility. It virtually unifies the whole body academic. In the old walled cities there are places known as so and so "within and without." Every college today has its "within and without," but they are one. And in their oneness very much of the new power of a college lies. The responsible cooperation of the alumni creates certain mutual obligations which ought to be recognized and acknowledged in the whole sphere of administration.

It is a noticeable fact that the growing tendency, as President Eliot describes it, has been encouraged by the trustees, who in many instances

have taken the initiative in giving representation to the alumni, and experience seems to prove very conclusively that, on the whole, the system has proved a success, wherever it has been tried.

Professor Hermann Schumacher delivered his inaugural address at the opening exercises of the University on September 26. As the first incumbent of the Kaiser Wilhelm professorship of German history and **The Kaiser Wilhelm Professorship** institutions he conveyed to America in general and to Columbia in particular the greetings of the University which he represents and of the sovereign whom he serves. The opening lecture of his course on industry and banking in Germany took place on October 4, in the presence of some two hundred auditors. His seminar, restricted to about twenty-five advanced students, deals more in detail with the economic problems of Germany, as compared with those of the United States. Both courses have proven themselves to be successful in a high degree. Professor Schumacher possesses unusual qualifications for the work which he is conducting. A long experience in the administrative service of his fatherland, several journeys of investigation to countries as far separated as America and China, the presidency of the great college of commerce in Cologne, the professorship at Bonn, and the responsible position of preceptor in economics to the princes of the German imperial family—all these combine to give him an acquaintance with actual life, a scholarly attitude towards pending problems, and a capacity to put his conclusions in telling form, which have already exerted their influence on the American students. Professor Schumacher is the author of an extensive list of scientific publications on economic problems, such as transportation, banking, exchanges, and the conditions of eastern Asia. Through the medium of lectures and addresses, in English and in German, before various organizations outside of the University, and in still other ways, the influence of his work has extended to wide fields, thereby amply demonstrating the wisdom of the plan of exchange in force between Berlin and Columbia.

The annual reports of the president and the treasurer were published in November. The president's own report is considerably longer than that of previous years, the additional space being devoted largely to a **Annual Reports** careful analysis of the salaries of professors during **1905-1906** the past fifty years—both the actual salaries and their comparative purchasing power. The concluding paragraph reads:

"The important facts, then, are: first, that the present average salary paid to a Columbia University professor is but one-half of the sum fixed as necessary thirty years ago; and, second, that the cost of living has meanwhile increased between 10 and 20 per cent. The purchasing power of the average salary of 1906 is, therefore, hardly more than 40 per cent. of the purchasing power of the salary established in 1876. In other words, the great and noteworthy expansion of the University which has been brought about by the labors of the University teachers has also been brought about at their expense."

The table showing the financial conditions and operations of the University for the year ending June 30, 1906, is as follows:

(The figures for real estate given in the following table are the assessed valuations on the records of the Bureau of Taxes and Assessments in the City of New York.)

Property owned, June 30, 1906:	Columbia University	Barnard College	Teachers College*	College of Pharmacy	Totals
1. Occupied for Educational Purposes.....	\$7,697,000 00	\$525,000 00	\$1,595,000 00	\$125,000 00	\$9,042,000 00
2. Held for Investment.....	22,863,809 92	684,810 31	719,588 57	—	24,267,608 80
Total	\$30,560,809 92	\$1,209,810 31	\$2,314,588 57	\$125,000 00	\$34,209,608 80
Outstanding Debt.....	3,271,000 00	25,874 36	—	200,000 00	3,396,874 36
Annual Budget for 1906-07:					
1. For Educational Administration and Instruction.....	\$1,188,616 73†	\$110,895 00	\$399,068 18	\$28,894 00	\$1,652,173 91
2. For Interest on Debt.....	99,120 00	—	—	4,500 00	103,620 00
Total	\$1,287,736 73	\$110,895 00	\$399,068 18	\$33,394 00	\$1,735,793 91
Income for 1905-06:					
From Fees of Students.....	\$335,043 47	\$53,776 83	\$314,948 65	\$37,582 09	\$941,351 04
From Rents.....	383,176 02	—	—	—	383,176 02
From Interest.....	163,064 24	28,154 58	28,949 24	—	220,168 16
From Miscellaneous Sources.....	131,505 92	10,067 07	4,311 01	9,868 05	155,752 05
Total	\$1,212,789 65	\$91,998 48	\$348,208 00	\$47,450 14	\$1,700,446 27

The other special sections are upon the Carnegie foundation for the advancement of teaching, the Theodore Roosevelt professorship, the cooperation between Yale and Columbia, the organization of the faculty of fine arts, the problems with regard to athletic sports and the allied subject of the proposed University stadium. The text of the State bill authorizing the filling in of the land for this purpose is printed as an appendix. The appendices include also an important report of the committee on finance to the trustees as to the general financial condition of the University.

* Including cost and income of the Horace Mann School, for 1905-06

† This includes by duplication the Barnard College salary item of \$75,300

The report of the treasurer contains a new table, showing in convenient form the cost of the development of Morningside Heights since 1898, and the gifts and legacies which have gone to pay for these expenses.

Professor Van Amringe's report, as dean of Columbia College, includes a recommendation that in general the instruction of first and second year students should be by recitation and commentary rather than by lecture, and deals also with the new system of College tuition fees which is to go into effect July 1, 1907. The report of the dean of the law school deals with questions concerning the program of studies and the requirements for admission. The report of the dean of the medical school calls attention to the increased clinical facilities offered to the upper classes. In the fourth year the scheme for 1905-06 gave each student four hundred and fifty-four hours of theoretical and clinical instruction in large classes, and four hundred and fifty-two hours of section work in which the student comes into personal contact with individual patients. The new plan divides the work so that the student will receive two hundred and ten hours of classroom instruction and eight hundred and ninety-eight hours of section work. The details of the proposed development of the anatomical museum made possible by the generosity of Mr. E. S. Harkness, are given elsewhere in this issue. The report of the acting dean of the faculty of applied science deserves careful study. It shows the close thought that Professor Sever has given to the problems before him, and the remedies for existing weaknesses which he suggests, while radical, seem thoroughly practicable. Professor Wheeler, as acting dean, presents the first report of the faculty of fine arts, from which we quote the following:

What is the function of a university in teaching the fine arts? How can it be of most service on one hand to the professional artist, the chief part of whose training must always remain in the studio, and, on the other hand, how can it best serve the student who would approach the study of art from the point of view of history and æsthetics? These questions are fundamental, and it is of vital importance that their full purport should be realized in providing for the development of the school. Many artists feel, and from a strictly professional point of view probably rightly feel, that the university has little to do with instruction in art. Nevertheless, the professional artist, if he is able even for a brief time to come into contact through outside study with the works of those minds who have guided human history in its various forms, ought to find thereby stimulus and enlightenment in his own endeavors, for the painting and the statue are after all but the expres-

sion of the human idea which inspires their creation. The university may then in an indirect way be of service to the professional artist, but its most important function, in my judgment at least, is to provide for the needs of those whose study is directed chiefly toward the historical development of art, and the problems of aesthetics.

Other sections of the report which are of unusual interest are paragraphs in the report of the dean of Teachers College with regard to the opportunities open to well-trained women teachers in domestic art and domestic science; the recommendations of the director of the summer session with regard to the expansion of that important part of the tender of the University; the suggestion of the secretary of the University that the present system of award of scholarships and prizes has been outgrown; the report of the superintendent of buildings and grounds as to the administration of the residence halls and the commons; and the librarian's inclusion of the officers of instruction as an "ex-officio staff" so far as purchases are concerned.

In commenting in the *QUARTERLY* for June, 1905, on the new program of studies for Columbia College, we suggested that its two most important features were probably the adoption of the half-year unit, making it possible for students to enter the College in February, and the provisions regulating grades and credits. The new program has now had a year of trial, with some interesting results. Twenty-nine new students entered the College in February and were thus able to take up their work immediately on leaving the preparatory schools. A number of students who planned to enter other schools of the University where the half-year unit does not obtain, took the College entrance examinations and spent a half-year in the College. It appears evident, therefore, that the provision for mid-year entrance has met a genuine demand and operated to the advantage of both College and students. It is especially significant that students who do not intend to complete the College course have nevertheless availed themselves of its privileges preparatory to entering other schools of the University.

The new program provides that students who have attained particular excellence in scholarship will receive additional credit, while none can be credited with more than one course in which he has received a D. The Registrar has furnished the figures illustrating the operation of this provision so far as it affected the matriculated students of last year. For the first half-year twelve students received

two A's; fifteen, three A's; six, four A's; four, five A's; six, six A's; and one, seven A's. None of these students received less than B in his other courses. According to the operation of the rule twenty-six students received one point extra credit; eleven, two points extra credit; and seven, three points extra credit. For the second half-year, twelve students received two A's; twenty-one, three A's; six, four A's; seven, five A's; five, six A's; and one, seven A's. Thus thirty-three students gained one point extra credit; thirteen, two points; and six, three points. There were in the first half-year fifty-two students who received two D's; thirteen, three D's; three, four D's; and one, five D's. In the second half-year thirty-three received two D's; and sixteen, three D's. The total number of students affected by this provision was 511 for the first half-year and 528 for the second. An examination of these figures shows that the new rule tended to raise the standard of scholarship in the second half-year. Sixty-nine points extra credit were gained in the first half-year and seventy-seven in the second, while no student received more than three D's in the second half-year and the number receiving two D's was nineteen less than in the first half-year.

The new program provided also for a course of study leading to the degree of bachelor of science. At the conclusion of the year there were enrolled in this course in all classes one hundred and fourteen students, while candidates for the degree of bachelor of arts numbered four hundred and forty-one.

Among the prescribed courses of the old program were one half-year in psychology and one half-year in economics. These prescriptions were replaced in the new program by a course for one year in the principles of science, and the courses in psychology and economics were changed to full year courses and made elective. It is interesting to discover that although the registration in these courses last year fell off considerably from what it had been in years previous, it has returned this fall to almost its former status. The theory of prescribed courses, namely, that students do not naturally tend to take the courses which are supposed to be of greatest importance for their intellectual development, is somewhat impaired by this fact.

After July 1, 1907, the system of tuition charges in Columbia College is to be materially changed. Instead of having a flat charge of \$150 per annum for tuition, the fees are to be fixed at the rate of \$5.00

**The New College
Fee System**

per point,—a point being academic work requiring attendance for one hour a week during a single half-

year. This change will neither increase nor diminish the total fee for students who take only one year of residence for a College degree, and will occasion no pecuniary loss to the College in the case of students who finish the course for an academic degree in less than four years. Under the old charge an increasingly large number of students were completing the requirements for the degree in three years, and paying therefor \$450 instead of the normal \$600. In his latest report as dean, Professor Van Amringe offers the following comment on the new arrangement:

This new statutory fee, therefore, taken in connection with the provisions referred to as to grades and credit in scholarship must stimulate "good" students to become "excellent," as high grades not only give honor to a student but save him time and expense by awarding him additional points towards a degree. In like manner they must stimulate "poor" students to become at least "fair" by penalizing them not only in time but in their purses for poor work as, by getting more than one D ("poor"), they will lose all the points assigned to all the courses, except one, in which D is given—thus necessitating a payment of five dollars for the opportunity of making good each of the points lost. A mark of F ("failed") in a prescribed subject will necessitate the paying over again for the privilege of taking again the same course, and so doubling the expense to a deficient student of a prescribed course. Such additional charges as those referred to are sound and just from every point of view, will probably bring strong family pressure to bear upon indifferent students, and may aid in solving the vexed and perplexing question of student absences from duty.

The selection of Mr. Frederick A. Goetze by the Trustees as dean of the faculty of applied science is, so far as we know, the first instance of a transfer from the purely executive side of the staff of a university

The New Dean of Applied Science to an important faculty position. The departure is an interesting one and we do not see how it could be made with better chances for success than in the present instance. The importance and dignity to which Mr. Goetze has raised the position of superintendent of buildings and grounds is well known in the University, but few realize the ceaseless devotion, in season and out of season, which this has involved. The students in applied science may well congratulate themselves that the same patient and resourceful devotion is from now on to be at their service also.

Mr. Goetze will assume his new duties on January 1, 1907, relieving Professor George F. Sever, who has served as acting-dean since the retirement of Professor Hutton from the deanship on July 1, 1905.

Mr. Goetze received his general and professional training at the Stevens High School, at Cooper Union, and at the schools of applied science of the University. He has also had extensive practical experience in engineering and in administrative work. From 1895 to 1899 he was assistant superintendent of buildings and grounds at the University and was advanced to the superintendency in the latter year. He has also been nominated for the newly created position of consulting engineer of the University.

Mr. Henry Lee Norris, a graduate of the Stevens Institute in the class of 1902, now assistant superintendent of buildings and grounds, was appointed superintendent to succeed Mr. Goetze.

THE UNIVERSITY

FACULTY OF MEDICINE

Department of Anatomy.—The most important advance of recent years in the development of the department has been made possible during the preceding session through the liberality of one of the friends of the University. For the past fifteen years the energies of the department have been directed largely towards the building up of an adequate equipment for undergraduate and research work in vertebrate morphology. During this entire preparatory period the collections of the department have been steadily and continually increased, until now the University is in possession of unrivaled material for instruction and investigation. To place this material in proper shape for the use of the undergraduate student in medicine there was required the establishment of a permanent students' museum, in which the selected preparations, mounted in readily accessible shape, and provided with the necessary explanatory text, should at all times be available for self-study and review in direct connection with the courses offered by the department. This has now become possible, and the second floor of the anatomical building has been fully equipped with exhibition stands. The department hopes that during the present winter a great part of the collections can be installed in this space, and that one of the most urgent needs of medical instruction will thus be satisfactorily met.

At the coming meeting of the Association of American Anatomists, to be held during Convocation Week at Columbia University, in conjunction with the meeting of the American Association for the Advancement of Science, the departments of anatomy of Princeton and Columbia are planning to present results of conjoined work extending over several years on the morphology and embryology of portions of the vascular system. The advantage of such cooperation and of the combination of the material at the disposal of both universities in the prosecution of scientific work has greatly commended itself to the officers engaged, by reason of the mutual stimulus obtained by the association and the more complete character of the results.

Department of Bacteriology and Hygiene.—The department of bacteriology and hygiene has been set apart from the department of pathology as an independent department. Professor Hiss has been pro-

moted from an adjunct professorship to a professorship of bacteriology and assigned to a seat in the faculty of medicine.

The changes inaugurated in the undergraduate and advanced courses in this department during the past academic year have proved advantageous. The lengthening of the course required of medical students has permitted a broader presentation of bacteriological methods and of their practical application to the solution of problems of disease and therapeutics. The advantage of the change in the time of giving the advanced course from the months of January, February, and March, to those of November, December, and January, is witnessed by the fact that nearly without exception students have availed themselves of the opportunity of carrying on further studies and research during the remainder of the year.

During the spring and summer members of the staff of the department and advanced workers were actively engaged in research work: Dr. Wadsworth on opsonins and on certain phases of experimental pneumonia as related to the crisis in this disease; Professor Arnold Knapp on opsonins; and Dr. C. E. North on the bacteria of milk from healthy and diseased cattle. Dr. Zinsser spent the summer months in Europe, studying in Vienna. Professor Hiss was also absent in Europe during the spring and summer.

Department of Clinical Pathology.—In response to the increased demand for the practical instruction of students in laboratory methods of diagnosis, a number of changes have been made in the teaching force and the courses of instruction in clinical pathology. It was felt that this great increase in the use of the methods of clinical pathology in medical diagnosis warranted the creation of a separate department in the former subject, which had previously been intimately connected with the department of pathology. In accordance with this view, an independent department of clinical pathology has been established, and Dr. Wood, the adjunct professor in charge of that subject, has been advanced to a full professorship with a seat in the faculty of medicine.

The systematic course in clinical pathology given to students in the third year will be continued as heretofore. This course offers an opportunity for the development of the general principles of the subject, together with a certain amount of practical work adapted to beginners in the field. In order, however, to give more advanced students an opportunity to apply the facts and methods that they have learned to the practical diagnosis of disease, they must have laboratory facilities while they are studying patients. This can evidently only be done in a

hospital or clinic. A new course has therefore been started in connection with the work of the Vanderbilt Clinic. During the past summer an extension was built to a small laboratory previously employed by the staff of the clinic. The new building is of sufficient dimensions to permit ten to twelve men to work simultaneously, this being the size of the fourth year sections. By the opening of the fall term this laboratory was equipped with the necessary instruments for clinical tests. The room is open from 9 a. m. to 1 p. m., and from 2 to 5 p. m., under the charge of two newly appointed assistants to Professor Wood, and thus three groups of students may work for a period of two hours each. The students obtain specimens from the patients in the Vanderbilt Clinic, or even bring the cases into the laboratory and there conduct all necessary examinations. Part of the work is carried out in conjunction with Professor Lambert's course in applied therapeutics, the laboratory tests often furnishing points of practical value in suggesting lines of treatment. Students who have been working in the hospitals under the supervision of the professor of medicine or other clinical teachers are also allowed to bring specimens for examination. The fourth year students who are assigned to the medical rooms in the Vanderbilt Clinic during the afternoon hours also use the laboratory from two to five o'clock in making examinations of cases.

Professor Wood carried out during the summer some experimental work on the nature of the lesions produced in the kidney by the action of certain toxic substances. During the past year Dr. D. S. D. Jessup was appointed pathologist to the Hahnemann Hospital, a position that offers valuable opportunity for obtaining material and for the scientific study of disease. The recent increase in the staff of the department by the appointment of Doctors James C. Greenway and Peter Irving has doubled its teaching force and thus gives much greater facilities for practical instruction. The further development of the department in offering opportunities for research work by advanced students and graduates is now being planned. A beginning has already been made through an anonymous donation for the purchase of instrumental equipment.

Department of Genito-Urinary Diseases.—The summer course in this subject was conducted by Dr. Whiting during June at the Vanderbilt Clinic and in the wards of Bellevue Hospital. Dr. Reynolds has been promoted from an assistantship to an instructorship. The equipment of the department has been increased by the addition of new examination tables, instruments, books of reference, charts and models.

Several interesting specimens have also been added to the pathological collection.

Department of Neurology.—Professor Starr has in press a new work upon nervous diseases of over eight hundred and fifty pages with two hundred and eighty-five illustrations. This contains a complete revision of his previous work, "Organic nervous diseases," with the addition of a second part dealing with functional nervous diseases, and thus covers the entire subject of neurology. There is a large amount of original work in this volume founded upon a careful study and analysis of the enormous clinical material which has been available in the Vanderbilt Clinic during the past twenty years. Several of the clinical assistants have aided Professor Starr in working up this material. Dr. Goodhart has analyzed two thousand two hundred and thirty-nine cases of chorea, Dr. L. Pierce Clark one thousand seven hundred and fifty cases of epilepsy, Dr. T. Stuart Hart two hundred and twenty cases of *paralysis agitans*, and to these statistics Professor Starr has added many cases from his own private material.

Professor Starr gave an address at the annual meeting of the American Medical Association, held at Boston in June, on "The present status of brain surgery." The paper aroused much interest and considerable discussion and has been translated and published in Vienna and Paris.

Dr. W. P. Spratling, of the Craig Colony of Epileptics, recently delivered a lecture on epilepsy before the third and fourth year students, which was illustrated by a number of biograph pictures of patients suffering from epileptic attacks. Professor Pierre Janet, of the University of Paris, gave a lecture before the third and fourth year students upon "Suggestibility as an evidence of the state of mental hysteria." Professor Janet has been delivering the Lowell lectures in Boston this year and also gave a course of lectures at Harvard on hysteria and its manifestations. Professor Janet is known as one of the most original workers and writers on the pathological side of psychology, and his lecture was fully appreciated both by the medical students and by the students in the psychological department who were invited to attend.

Professor Peterson is spending the winter abroad, and is visiting the chief psychiatric clinics of Germany with the view of obtaining all possible information which may aid in his project of establishing a modern central municipal reception hospital for the insane in New York City.

Professor Bailey spent four months during the spring and summer

at the clinic of Professor Kraepelin in Munich. This is now the center of much work in mental diseases and attracts students from all over the world. Professor Bailey will give during the spring a course of lectures upon medico-legal subjects, which will be of value not only to the students of medicine but also to law students. He will deal with traumatic neurosis, which gives rise to much litigation for damages against railways, the effects of alcoholism and drug habits upon the mind, and testamentary capacity as influenced by diseases of the mind and nervous system and by old age.

Dr. Charles Alwood, the senior assistant at the neurological clinic, has just returned from a year of study in Vienna, Berlin and London.

Department of Pathology.—Since its origin in the laboratory of the Alumni Association of the College of Physicians and Surgeons nearly thirty years ago, at a time which marks the beginning of systematic laboratory instruction in the medical schools of this country, the department of pathology has formed a center around which have been grouped, as they have developed, a series of more or less closely related disciplines. These are normal histology, bacteriology and hygiene, clinical pathology and embryology. Each of these themes is now represented by separate practical courses of laboratory instruction. While this grouping of themes is a natural result of the way in which one by one they have been developed and brought into the curriculum of the medical school, the administration of so many laboratory courses under one direction has become less and less practicable and wise, as each has become broadened and more complex with the advance of science. With the opening of the present college year, bacteriology and hygiene, and clinical pathology have been made independent subjects, Dr. Hiss being made professor of the former and Dr. Wood of the latter.

Department of Pharmacology, Materia Medica and Therapeutics.—Several changes in the courses of instruction in this department have taken effect during the present year. The course for second year students now includes one weekly lecture by Dr. Bastedo, and two weekly recitations, conducted by Doctors Bastedo and Richards, throughout the year, on materia medica and pharmacology. Dr. Jelliffe's lectures on the nature and source of drugs, which are given weekly during one-half of the year, and the laboratory instruction in pharmacy under the direction of Dr. Bastedo, which consists of one exercise each week during the whole year, are continued as heretofore. In addition to the lectures given to the students of the third and fourth years by Professors Herter and Lambert, short courses of lectures on selected sub-

jects in pharmacology and therapeutics are given to the third year students by Drs. Williams, Patterson, and Richards. The topics are amplified and emphasized by Dr. Williams in a series of weekly recitations. The latter also conducts systematic instruction for the third year students in therapeutics. An optional laboratory course in experimental pharmacology by Dr. Richards is also open to the third year students. Instruction in applied therapeutics has been extended to cover four hours in the morning instead of a single hour, as heretofore. During this increased time the students are brought into personal contact with more patients and act in a great measure as assistants in the routine work of the Vanderbilt Clinic. In this way they are enabled to study many types of disease, especially those of lesser ailments which ordinarily are not considered of sufficient importance for clinical instruction, and at the same time the rarer and severer types of disease are not neglected.

Some of the results of the investigations carried on during the past year by Professor Herter and his co-workers were presented by him before the Harvey Society on November 3, in a lecture entitled "The common bacterial infections of the digestive tract and the intoxications arising from them." A more extensive presentation of the work will be made in a book shortly to be published by the Macmillan Co. The results of the investigations of Dr. Richards, in collaboration with Dr. Howland of the department of pediatrics, concerning experimental intoxications with indol and skatol, were presented at the annual meeting of the American Society of Pediatrics, held in May at Atlantic City, and at the June meeting of the Society for Experimental Biology and Medicine. Further work on this and similar subjects is now in progress.

A machine for the manufacture of liquid air has been erected in the College under the auspices of this department, and during the past summer has been placed in running order. By means of the apparatus it is possible to obtain in a suitable form for investigation the intracellular juices of bacteria and of cells of animal tissues. The liquid air is also available for use in the treatment of certain diseases of the skin, and successful results from its application at the Vanderbilt Clinic have been reported.

Department of Physiological Chemistry.—The laboratory of physiological chemistry at the College of Physicians and Surgeons was open to investigators throughout the summer. The head of the department and several assistants were present in the laboratory daily. A number

of investigations in progress during the winter were completed and other work inaugurated. Several medical students and practitioners availed themselves of the opportunity thus afforded for special research under guidance.

During the summer Mr. Welker, in the capacity of expert chemist, assisted the borough authorities of Red Hill, Pa., in their effort to secure a satisfactory water supply. Mr. Welker's analytic results will be made part of a report of the Pennsylvania State Board of Health. Doctors William Salant and Nellis B. Foster have been reappointed fellows of the Rockefeller Institute for Medical Research. They will continue the researches they have had in progress during the past year and will develop several new phases of the problems they have been investigating, mention of which was made in a recent issue of the *QUARTERLY*. Mr. A. D. Emmett, a graduate of the University of Illinois, has been appointed a scholar in physiological chemistry.

During the past few months a number of communications have been presented to various societies by workers in this department as follows: to the American Medical Association by Professor Gies and Dr. Salant; to the Society for Experimental Biology and Medicine by Professor Gies, Dr. Salant, Dr. Foster, Mr. Welker, Mr. Berg, and Mr. Lucas; and to the New York Academy of Medicine by Dr. Foster.

In conformity with plans which have been proposed by the head of the department to effect more intimate cooperation between this department and various other departments of the University, Nellis B. Foster, M.D., clinical assistant in applied therapeutics, has been appointed an instructor. He will assist in the work of developing instruction and research in pathological phases of biological chemistry. A room has been provided in Fayerweather Hall for the conduct of cooperative researches by workers in the departments of physics and physiological chemistry. During the past year a biochemical research on the distribution of radium in the animal body was made possible by the cooperation of Dr. Pegram of the department of physics with Dr. Meyer of this department. A number of similar investigations of biochemical importance, in which the polariscope, spectroscope and other special instruments of precision will be employed, are about to be inaugurated by workers in this department and the department of physics. Dr. Lüpke, bacteriologist of the Sloane Maternity Hospital, is now receiving the assistance of Mr. Welker of this department in chemical work of clinical importance. Dr. Gies has begun the collection of a fund for the special encouragement of biochemical research. About a thousand

dollars have already been contributed. It is hoped that a considerable amount may be raised in order that the extending activities of the department may be aggressively maintained.

It was found on examination of the records of the first year students of medicine that all but about a dozen have taken courses in general chemistry before their entrance to the medical school. For two years it has been announced that, beginning with the session of 1907-08, general inorganic chemistry would be required for admission and that the time heretofore devoted to inorganic chemistry would be given to an extension of the work in organic chemistry. The fact that nearly all the students of the present first year class in medicine have already passed satisfactory courses in general chemistry has made it possible this year to abbreviate the work in inorganic chemistry and to give more time to organic chemistry. A course in biological chemistry will be offered to the members of the University section of the junior class in the School of Pharmacy during the months of April and May. The course will be given by Professor Gies at the Medical School.

Mr. Edward C. Brenner, a third year student of medicine, has recently issued a volume entitled "Questions and answers in physiological chemistry." The book is intended for the special use of the medical students who take the required work in physiological chemistry.

Professor Gies is a member of the local executive committee for the meetings of the American Association for the Advancement of Science, and is chairman of the sub-committee in charge of the physiological division of the scientific exhibition to be held under the auspices of the New York Academy of Sciences at the American Museum of Natural History during Convocation Week.

Department of Physiology.—During the past June Dr. Emerson offered for the first time a very successful course of eighteen exercises consisting of an experimental laboratory study of the pathology of function. Some of the more usual pathological lesions of the circulatory and respiratory systems were reproduced for the sake of observing their effects upon function, as well as upon structure locally and generally. In so far as possible, graphic records were made of the effects. The relative values of various diagnostic and therapeutic measures in the discovery and treatment of the errors produced were tested. The course was attended by four undergraduates and two graduates. Dr. Emerson has been appointed instructor in medical diagnosis at the dispensary of Bellevue Hospital.

During August Professor Lee attended the meeting of the British

Medical Association at Toronto and presented some of the results of his investigations of fatigue, under the title "The causes of fatigue in certain pathological states." The titles of Doctors Shearer, Bingham and Keator have been changed from assistant demonstrator to demonstrator. Joseph Grant Yocum, a graduate of Stanford University in 1897, and of the Columbia School of Medicine in 1901, has been appointed demonstrator. After receiving his degree of M.D., Dr. Yocum served for three and one-half years in the hospitals—first as house physician at the City Hospital; then as house surgeon at the Presbyterian Hospital, and lastly as resident physician at the Manhattan Maternity Hospital. He is assistant visiting surgeon at Trinity Hospital, and assistant physician at the dispensary of the Presbyterian Hospital.

FACULTY OF POLITICAL SCIENCE

Department of Public Law.—Professor Burgess, dean of the faculty of political science, is absent this year, occupying the Theodore Roosevelt chair of American history and institutions at the University of Berlin. His work in Columbia University is being given by Professor Shepherd and Dr. Beard, of the history department.

Professor Goodnow spent three months during the spring and summer in England as a member of the Commission appointed by the National Civic Federation to investigate public ownership in Great Britain. He was chairman of the sub-committee which laid out the scope and plan of the Commission's work. During the summer he also published two volumes of "Cases in administrative law" under the sub-titles "Government and administration" and "The law of officers." In the absence of Professor Burgess, Professor Goodnow is acting as dean of the faculty of political science.

Department of History.—Professor Sloane delivered an address on the teaching of history in colleges before the College of the City of New York in May. During the summer he was engaged in preparing a new edition of his "Napoleon."—Professor Dunning devoted his vacation to writing a "History of the United States from 1865 to 1877," which he is contributing to the American Nation Series.—Professor Osgood published during the summer eight volumes of the records of the City of New York. In this work he was assisted by Mr. Austin B. Keep.

Professor Shepherd is busy with his report for the Carnegie Institution on American archives in Spain, and in the preparation of an atlas of general history. He is also serving as judge of the manuscripts sub-

mitted in the competition for the John Barrett prize offered for the best paper on Latin-American relations.—Professor Shotwell has resumed his work after a two years' leave of absence abroad.—Dr. Beard has issued through the Macmillan Company an "Introduction to the English historians," and is collaborating with Professor Robinson in the preparation of a manual of "Modern European history," which will be published by Ginn & Company.—Dr. Haworth, of the history department of Teachers College, has been appointed lecturer in history in Columbia. His thesis on "The disputed presidential election of 1876" has been published by the Burrows Brothers Company.

*Department of Economics and Social Science.**—Professor Alvin S. Johnson, who was called to a professorship at the University of Nebraska, has been replaced for this year by Dr. A. C. Whitaker, who is taking a year's leave of absence from his professorship at Stanford University.

Professor Seligman's book on "The shifting and incidence of taxation" has been translated into Italian. His book on "The economic interpretation of history" has been translated into Japanese, and no less than three Russian translations of the same work have appeared during the past year. One of these has been published in a very large edition at the price of seventeen kopeks (eight cents).

The doctor's dissertation of Mr. G. S. Snyder on "Railway taxation in Wisconsin" has been accepted for publication by the American Economic Association. Several doctor's dissertations of past and present fellows in the department of economics are nearing completion. Among these are dissertations by Mr. E. E. Agger on "State budgets"; Mr. Wing on "The greenback issues in Maine"; Mr. Gilbert on "The fiscal and industrial history of Oregon"; Mr. Jacobstein on "The tobacco industry"; Mr. Friedman on "Taxation in Massachusetts since the Civil War"; Mr. Guthrie on "Pre-revolutionary socialism," and by Mr. Williamson on "The economic history of Cincinnati."

Professor Seligman has been appointed by Governor Higgins to membership in the commission to revise the system of taxation in New York. He has also been elected to the board of directors in the Merchants' Association of the State of New York.

On October 9 Professor Seager began a course of nine lectures before the School of Philanthropy; three treat of English social reformers, and the remaining six of economic changes during the nineteenth century.

* A notice of the activity of Professor Hermann Schumacher will be found under "Editorial Comment."

From April 19 until the end of July Professor Devine was on leave of absence, being in charge, by appointment of the American National Red Cross, of the relief work in San Francisco. The administration of the great relief fund, approximately ten million dollars, in addition to the government appropriation of two and a half million dollars, affords the most conspicuous example in the world's history of cooperation and organization in relief work. Generous and emphatic recognition of the assistance given during the first four months of this work by the special representative of the Red Cross has been given, not only by the national officers and executive committee of the Red Cross itself, but by the commanding general of the Army, the governor of California, the mayor of San Francisco, and the volunteer citizen committees, with all of which bodies Professor Devine sustained continuous and cordial relations throughout his service in San Francisco. During July he was chairman of the relief commission, which succeeded the army and Red Cross in the executive administration of relief, and he was the first chairman also of the rehabilitation committee, which has charge of the disbursement of large sums to individual families for the purpose of reestablishing them in their homes and in income-producing occupations. One of the most pressing problems which have arisen in San Francisco—the housing problem—is discussed by Professor Devine in the December number of the *Political Science Quarterly*.

FACULTY OF PHILOSOPHY

Department of Anthropology.—With the present year the general plan of instruction in anthropology has been considerably changed. Besides the introductory course which has been given by Professor Farrand for a number of years, a new introductory course on general ethnography, given by Professor Boas, has been added, which, with the course on prehistoric archæology given by Professor Saville and Dr. Berkey (the latter of the department of geology), enable the student to obtain a comprehensive view of the subject in three of its important branches. Furthermore, the course on the statistical study of variation, which has been given by Professor Boas for a number of years, and which was intended as an introduction to this subject, for students of anthropology as well as for students of psychology, biology, and social sciences, has been given a more proper place, being now given in the mathematical department, the course being intended as a preparation for statistical work of all kinds. This has made it possible to introduce as a new course in anthropology an introductory course in

anthropometry, which is given by Professor Boas. Among the more advanced courses, Professor Farrand continues his discussions of ethnological subjects. The course on ethnography has been so reorganized that the ethnography of America and Siberia, and that of Africa, Polynesia, and Australia, will be given in alternate years. The ethnography of eastern Asia is taken care of in two courses given by Dr. Berthold Laufer. Instruction in American archaeology is continued, as formerly, by Professor Saville and Mr. Bandelier. The course in American languages, which heretofore has been given as a two-year course, has been divided into an introductory and an advanced course, both being given every year by Professor Boas.

Professor Saville spent the summer in Ecuador, investigating the archaeological remains of the coast province of Manabi, and of the ancient Puruhas in the vicinity of Riobamba in the interior. This work was undertaken in order to gather material bearing on the ancient cultures of the great region in northwestern South America lying between Peru and Panama. The investigation will be continued next year in northern and southern Ecuador. A preliminary report is being prepared, which will be published at the end of the year, on the archaeology of Manabi, giving especial attention to the question of the famous stone seats of this province. Dr. Wissler spent a few weeks among the Blackfeet, continuing his former investigations among that tribe. Much of the time of Professor Boas was taken up with preparation for the International Congress of Americanists, which was held at Quebec from September 9 to 17. He prepared for the use of the members of the Congress "A summary of Canadian ethnology," in which work he was assisted by many specialists, and which was published by the minister of instruction of the province of Ontario. He was also occupied with the work of editing the results of the Jesup North Pacific expedition, several parts of which were published during the past year. Dr. Berthold Laufer has been engaged in investigations relating to the studies which he carried out in China during a three-years' journey undertaken under the auspices of the American Museum of Natural History, the expenses being paid from a grant made by Mr. Jacob H. Schiff. Two of the students of the department undertook journeys of exploration among the Western tribes. Mr. Edward Sapir studied the Takelma, one of the tribes of Oregon which are on the verge of extinction. His work was done under the auspices of the Bureau of American Ethnology. Mr. R. H. Lowie visited the Shoshone for the American Museum of Natural History.

Department of Chinese.—At the close of the last academic year the courses of Peking colloquial, hitherto given by Mr. R. Kliene, were temporarily abandoned. Dr. B. Laufer joined the department, as lecturer, to assist in giving courses in Chinese and also in Tibetan, Mongolian and Manchu. The results of the work accomplished have been very satisfactory, although the number of students has been small. The department is now in its fifth year, and it is now possible to distinguish certain classes of students attending its courses and seminars.

The seniors are mostly men who have studied the language for a number of years. The beginning of the present year, for instance, shows two Japanese, one Chinese, and one American student, all of whom are able to read the language, and are devoting their time to research in Chinese literature. The American seniors who have been in attendance in this and former years were without exception missionaries, who had spent between four and eight years in China and returned there after a year's study. Student interpreters in the consular service, both of the United States and other countries, have not as yet availed themselves of the opportunities furnished by the department. Four new students preparing for various careers have taken up Chinese elementary studies in the present half-year, and a Japanese student has commenced Tibetan under Dr. Laufer, who also has good audiences of non-linguistic students in his ethnological courses on far-eastern subjects.

Department of English.—The number of graduate students registered for majors in the department is one hundred and twenty-one, as against one hundred and ten in October, 1905, and eighty-eight in October, 1904. In Barnard College there are five hundred and forty-three students registered in eleven courses, as against four hundred and eighty-nine in the same courses for 1905-06, while in Columbia College there are eight hundred and forty-two registrations in eleven courses, as against seven hundred and fifty-six in October, 1905.

Among recent appointments to teaching positions of former students in the department are the following: Albert Davis, A.M., 1904, instructor, Wesleyan University; Margaret C. Davis, graduate student, 1903-06, teacher of history and English in Brownell Hall School, Omaha, Neb.; Adele Lathrop, A.M., 1905, instructor, Wellesley College; William E. Leonard, Ph.D., 1904, instructor, University of Wisconsin; Howard J. Benchoff, A.M., 1904, principal, Massanutten Academy, Woodstock, Va.; Miss A. Barnette Miller, A.M., 1903, instructor, Vassar College; Fred G. Fox, A.M., 1905, and William P. Wharton, A.M., 1906, school appointments in Chicago and New York, respectively.

Professor Brander Matthews delivered an address on "Simplified spelling" before the Rhode Island Teachers' Institute at the annual meeting held at Providence on October 19.

Professor George Rice Carpenter is spending his sabbatical year in France and Italy.

Department of Germanic Languages and Literatures.—For the current year the number of registrations in the department is as follows: Columbia College, three hundred and fifteen; Barnard College, two hundred and ninety-two; Teachers College, thirty-two; graduate schools, one hundred and thirty-seven; miscellaneous, thirteen; total, seven hundred and eighty-nine; if two hundred and four for the summer session and eighty-five for extension courses are added, the total registrations amount to one thousand and seventy-eight, which represents a healthy increase over last year. At the last commencement, the degree of Ph.D. was awarded to two students with majors in German and that of A.M. to six. This year instruction is offered in forty-four courses with an aggregate of one hundred and twenty-nine hours per week, distributed as follows: In Columbia College nine courses, thirty-two hours; in Barnard College ten courses, forty hours; in Teachers College four courses, ten hours; under the faculty of philosophy fourteen courses, twenty-eight hours, of which twelve courses are open also to undergraduates; in extension teaching seven courses, nineteen hours. Making allowance for identical courses given under two or more faculties, the actual number of independent courses is twenty-nine. In the summer session thirteen courses with an average of thirteen hours per day were given, and German progressed to the third place in point of attendance.

The courses offered for the first time in 1906-07 have proved their *raison d'être*. Twenty-four students have registered for Professor Thomas's "German drama in the nineteenth century" (first half-year) and Professor Tombo's "Hauptmann and Sudermann" (second half-year). Mr. Heuser's "Selections from nineteenth century writers" has an enrolment of seventeen, while "German composition and colloquial practice" in Barnard College has an enrolment of thirty-two. Owing to the influx of thirty-eight students under the new arrangement with Teachers College, additional sections of German A and German 1-2 had to be established in Barnard College.

Professor Carpenter has been reelected secretary of the University Council. He was one of three representatives of the University at the annual meeting of the Association of American Universities, held at

Harvard November 23-24. For the free-lecture system of the New York board of education, Professor Tombo delivered a course of four lectures on "Representative Germans" during October and November. Mr. Heuser has given an illustrated lecture on "Heine and his *Travel-Pictures*" before the Brooklyn Institute of Arts and Sciences.

Word has been received as to the whereabouts of the following gentlemen, at one time or other connected with this department as students or as instructors: Mr. F. W. Hauhart has been appointed instructor in the University of Michigan; Mr. W. E. Metzenthin, instructor in the University of Texas; and Mr. P. Seiberth, instructor in the Washington University at St. Louis.

Department of Indo-Iranian Languages.—In the middle of October Professor Jackson delivered a series of lectures on special subjects relating to the Orient before the Society of Pedagogy and the Contemporary Club of St. Louis, the University of Indiana, and in Dayton, Ohio. His new volume, "Persia, past and present," was published by the Macmillan Company in September.

Professor Jackson and Dr. Yohannan, as well as several students and former students of the department, Dr. Louis H. Gray, Mr. Montgomery Schuyler, Jr., Mr. George C. O. Haas, Mr. Maneckji Nusservanji Dhalla, and Mr. Edward Sapir, have contributed papers to a memorial volume to be published in India in honor of the late distinguished German Orientalist, Friedrich Spiegel.

The Indo-Iranian Club held a most successful meeting on October 23. Eleven members were present, and a number of interesting papers were read and discussed. The sessions of the Club have become an integral part of the work of the department and form an important adjunct to the regular courses of instruction.

Department of Latin.—Professor Peck has been reelected president of the New York Latin Club for the ensuing year.

Professor Egbert delivered a lecture at Vassar College, on November 16, on "The Altar of Peace of Augustus." Professor Knapp lectured at the same institution, on March 16, on "The originality of Latin literature," and also twice in May at the University of Indiana. At the annual meeting of the Classical Association of the Middle West and South, held at St. Louis in May, he read a paper on "Travel in ancient times as seen in Plautus and Terence." This paper is to appear in *Classical Philology* in two installments.

The teaching force of the department of Latin has been augmented this year by the appointment of Dr. Frederic Taber Cooper as lecturer.

Dr. Cooper, who was formerly an assistant in this department, took his doctor's degree at Columbia in 1895 and published at that time his well known dissertation on "Word-formation in the Roman *Sermo Plebius*," which is a standard authority on this subject both in Europe and in the United States.

During the coming year, Professor Peck will complete his edition of the Satires of Juvenal upon which he has been working for a long while. It will probably be published in the autumn.

By means of the Drisler classical fund Professor Olcott has acquired for the department a number of antiquities for the use of students in his archaeological courses. These include a series of Roman stone weights labeled from three ounces (*uncia*) to three pounds (*libra*), partly from the collection of the late Professor Prospero Sarti of Rome, partly from recent excavations; a collection of terra cotta lamps with makers' names, dating from the first century B. C. to the third century A. D.; and a few early vases from Faliscan tombs at Fiano, northeast of Rome, which are remarkable for their incised designs representing conventional plants and animals.

In June Miss Hirst attended the annual meeting of the Society for the Promotion of Hellenic Studies, in London, and studied for a time at Newnham College, Cambridge.

Dr. T. Leslie Shear has begun his work as tutor in classical philology at Barnard College. Mr. Shear received his doctor's degree at Johns Hopkins, in 1904, and has spent the last two years in Greece, Sicily, Italy, and Germany.

Departments of Philosophy and Psychology.—Among the summer activities of the members of these departments may be mentioned, first, the summer session of the University. The courses in philosophy were conducted by Dr. Montague and by Professor Thilly of Princeton, now of Cornell; those in psychology were conducted by Professor Woodworth and by Professor Kirkpatrick of the Fitchburg Normal School, assisted by Mr. Bruner of the department of child study of the Chicago public schools. The courses in both departments were well attended.

Professors Dewey and Tawney and Drs. Montague, Miller and Cohen were among the lecturers during the past summer at the Glenmore School of the Culture Sciences, in the Adirondacks. Professor Thorndike delivered a course of lectures at the summer school of the University of Tennessee. Professor Woodworth delivered the annual address before the American Medico-Psychological Association at their meeting in Boston, on the subject, "Psychiatry and experimental psychology."

Professor Fullerton, whose leave of absence has been extended, is expected back next year. His courses meanwhile have been provided for by Dr. Miller, who conducts the course in metaphysics, and by Professor Tawney, who conducts the seminar in types of epistemological theory. The reappointment of Professor Tawney, who has been given an additional year's leave of absence from Beloit, has made possible also the strengthening of the course in the principles of science and the offering in the history of philosophy. The positions of assistant in philosophy have been filled by the appointment in Columbia College of Dr. Harold Chapman Brown, of Harvard University, and in Barnard College of Mr. Warner Brown, of the University of California. Dr. Morris R. Cohen, of Harvard, has been appointed lecturer in philosophy. He is assisting Professor Adler in the conduct of the latter's seminar and is offering courses in post-Kantian idealism and in the philosophy of history. The assistantships in psychology are filled this year by Dr. F. Lyman Wells and Mr. W. C. Ruediger. Of last year's assistants, Mr. David F. Swenson is back in his position as instructor in philosophy in the University of Minnesota; Mr. Stevenson Smith is now professor of philosophy and psychology in Hampden-Sidney College, Virginia; and Mr. F. M. Hamilton is professor of psychology in the New York Training School for Teachers.

Professor Dewey is delivering a course of lectures on the philosophy of education at Pratt Institute, Brooklyn, and Professor Lord is continuing his lectures at the Finch School, in this city.

Of the thirteen contributions in the memorial volume published this fall by former students of Professor Garman, of Amherst, in commemoration of his twenty-five years of service, two are by members of these departments: "The problem of consciousness," by Professor Woodbridge, and "The cause of a voluntary movement," by Professor Woodworth.

The *Archives of Philosophy, Psychology and Scientific Methods*, which have hitherto been conducted under the joint editorship of Professor Cattell and Professor Woodbridge, will hereafter be conducted as two series known as the *Archives of Philosophy* and the *Archives of Psychology*. The former will be under the editorial management of Professor Woodbridge, and the latter under that of Professor Woodworth.

Department of Romance Languages and Literatures.—The number of students under the influence of the department has reached a figure never before attained. The registration is as follows: Columbia Col-

lege, 288; Barnard College, 161; Teachers College, 7; faculty of philosophy, 106; extension courses, 67; summer session, 101; under the articles of cooperation with the *Alliance Française*, 275.

Three new officers of instruction have been added to the teaching force of the department, Dr. Gill as tutor, and Dr. Gerig and Mr. Bigongiari as lecturers. Dr. Gill, who comes from Harvard University, where he received the degree of Ph.D. in 1906, takes the place of Dr. Holbrook, who resigned his position at Columbia in order to accept an instructorship at Bryn Mawr College. Before taking up his graduate work at Harvard Dr. Gill taught for two years in the Case School of Applied Science.

During the summer Dr. Fitz-Gerald was unanimously elected a member of the Royal Spanish Academy in the class of foreign correspondent. The significance of this election is enhanced by the fact that the three gentlemen who nominated Dr. Fitz-Gerald, namely, Señor Menendez y Pelayo, Señor Cotarelo and Señor Menendez Pidal, are the three foremost living Spanish scholars in the field of Spanish philology and literature. Dr. Fitz-Gerald has also been selected by Professor Wendelin Foerster, of the University of Bonn, as the editor of Lope de Vega's *Novelas*. The edition will be a critical one based upon the original text, and will be accompanied by an introduction and notes. Dr. Fitz-Gerald will be assisted in this work by Mrs. Fitz-Gerald.

A public address on the significance of the work of the Simplified Spelling Board was given by Professor Todd at Norfolk, Conn., in September. The Thursday afternoon French lectures were resumed on November first.

Two new graduate courses are given this year by the department, in addition to those mentioned in the June issue, namely, Romance philology, 201-202, "Critical study of the *Chanson de Roland*," by Professor Todd, and Romance philology, 207-208, "The oriental element in the Romance literatures of the middle ages," by Dr. Gill.

The first prize in the competition arranged by *Poet Lore* has been divided between Professor Page and another contestant. A second poem submitted by Professor Page was awarded third place in the contest.

FACULTIES OF PURE AND APPLIED SCIENCE

Department of Astronomy.—The summer course in geodesy or higher surveying was given at Osterville, Mass., where it has been conducted for the last nine years. Professor Jacoby was in charge, and was assisted by Dr. Mitchell, and Messrs. Yates, Hartwell and Hendren.

The number of students in attendance is increasing gradually, the course being required for the degree of civil engineer.

Professor Poor made many tidal observations at Shelter Island during the summer, using a tide-gauge arranged by Professor Hallock. The results have been communicated to the U. S. Coast Survey office at Washington, and will be used in determining new tidal constants for Shelter Island.

An unusually large number of publications in the series issued by this department have come from the press during the summer. The most important of these is entitled "The variation of latitude and constant of aberration, part II," by Rees, Jacoby and Davis. Together with part I, published in 1895, this forms a quarto of 342 pages. Inasmuch as the appearance of this volume marks the completion of the most extended piece of astronomical work undertaken by Professor Rees during his long term of service at Columbia, it seems fitting to record here the regret felt by the other authors of the book that their chief could not take part in the final preparation of his work for the press.

The department also issues No. 24 in the series of Contributions from the Observatory of Columbia University, entitled "Rutherford photographs of the stellar clusters κ and χ Persei," by Anne Sewell Young.

The third publication to be distributed immediately presents numbers 1 and 2 in the series of Contributions and contains reprints of two papers by Professor Rees: the first is an account of the life of Lewis Morris Rutherford; the second a catalog of his photographic plates deposited at Columbia College. It had always been the intention of Professor Rees to write at greater length on these two subjects and he had reserved the first two numbers in our series of Contributions until he should have leisure to do so. As this has now become impossible, it has seemed best to complete the series by reprinting his two shorter papers on the subjects he intended to amplify.

The erection of the new Wilde observatory, which was to have been finished in time for the opening of the University in September, has been somewhat delayed; the building is nearing completion at the present time of writing.

Department of Botany.—Graduate students in botany have received appointments as follows: Miss Helen L. Palliser, assistant, Vassar; Miss Mary F. Barrett, assistant, Wellesley; Miss Elizabeth I. Thompson, assistant, Barnard; Mr. H. H. York, instructor, University of Texas.

The students who received the doctor's degree in June have received appointments as follows: Henry A. Gleason, instructor, University of Illinois; Ira D. Cardiff, professor, University of Utah; Charles B. Robinson, assistant curator, New York Botanical Garden. Dr. Howard J. Banker already held the position of professor of biology in DePauw University.

The following changes have taken place in the staff of the department: Mr. Chester A. Darling has been appointed assistant in botany to succeed Dr. Cardiff, Miss Jean Broadhurst has been appointed instructor in botany at Teachers College, and Miss E. I. Thompson has been appointed second assistant to the teaching staff at Barnard.

Dr. Curtis has been supervising the preparation of illustrations for his text-book which will soon be ready for publication. Dr. Richards has been advanced to a full professorship at Barnard College. He spent his summer largely in work at the Botanical Garden. Professor Underwood spent six weeks during August and September in botanical exploration in Jamaica in company with Dr. Britton and others. Special attention was given to the needs of the tropical botanical laboratory maintained by the Botanical Garden at Cinchona; considerable time was also spent in the little-explored cock-pit country in the central-western portion of Jamaica.

The department is overcrowded with students, the changes in the curriculum being partly responsible for the increase among the undergraduates; in spite of the loss of seven graduate students, as noted above, the department has its usual quota of advanced students, who are pursuing their work mainly at the Botanical Garden, where the facilities increase with every year's progress in the development of that institution.

DEPARTMENT OF CHEMISTRY.—The registration during the summer session of 1906 showed the customary increase, notwithstanding the fact that no new courses were offered, and the increase was considerably greater than the corresponding increase in the total registration.

Analytical Chemistry.—The leave of absence granted Professor Wells in September, 1905, has been renewed for a second year. Mr. F. V. D. Cruser has resigned his lectureship in analytical chemistry to enter technical work, and has been succeeded by Mr. Arthur J. Mettler. Mr. Otto Kress succeeds Mr. Mettler as assistant in the quantitative laboratory.

During the past year Messrs. Cruser and Thompson completed their investigations (on chromicyanides and on silver-platinum alloys, re-

spectively) and received the doctor's degree. Results of these investigations as well as of studies on proteolysis in milk, and on the osazone reaction of glucose and fructose have been published in *The Journal of the American Chemical Society*.

During the summer vacation Mr. Mettler and Mr. Sinclair assisted Professor Sherman in the work carried out in cooperation with the U. S. Department of Agriculture upon iron and calcium in foods, and their relation to human nutrition. The results will appear in a bulletin of the Department. The investigations on iodine titrations, the analytical properties of pine oil, ammonia in milk, and the ash constituents of foods are being continued.

An unusually large number of graduate students, many of whom will carry on research work, have entered the analytical laboratories this fall. A new laboratory course in organic analysis and food investigation, restricted to graduate students, starts with an enrolment of eight students. The advanced lecture courses in analytical chemistry, although no longer required of students in applied science, both show an increased registration. The laboratory continues overcrowded, especially as regards facilities for graduate work. The small room equipped last year for two research students is now occupied by four, and it has been necessary to assign other graduate workers to the rooms which are used primarily for electrolysis, water analysis, and for the personal work of the instructors.

Practical Electrochemistry.—Additions to the laboratory equipment include precision measuring instruments for alternating currents, consisting of Westinghouse ammeters with transformers, reading up to 1600 amperes, and Weston voltmeters with multipliers reading to 150 volts. Apparatus under construction consists of an impedance-coil and auto-transformer for use with electric furnaces.

The following subjects are being investigated in the laboratory: Preparation of metallic calcium; influence of certain organic compounds on metallic deposits; influence of pressure, agitation, and rotation on metallic deposits; and the carbides of boron.

Industrial Chemistry.—An important change was made last June by Professor Pellew with regard to the requirements of the fourth year students for the summer memoir. In former years this memoir has consisted of a description, with drawings, of some manufacturing plant, and it was a matter of very considerable difficulty for the students to select a suitable subject and to obtain the information that was necessary, in order to produce a satisfactory memoir. This year, after the

customary summer work in industrial chemistry, and the visiting of numerous factories and chemical industries in and near the city, Professor Pellew assigned to each fourth year student, for the summer memoir, the preparation of plans, working drawings, and detailed estimates of cost, for the building and equipment of a chemical laboratory, such as they might be called upon to construct at an early stage in their professional career, the conditions of the problem being varied for each student. These memoirs are now being submitted and so far have proved extremely satisfactory; they have evidently aroused a great deal of interest on the part of the individual students.

Organic Chemistry.—Since the last report from the organic laboratory a number of papers have been presented before the New York Section of the American Chemical Society, embodying the results of various investigations. At present researches are under way with the quinazolines, the naphthotetrazines, substituted phthalic acids, sulphanilic acids, isomeric oxygen and nitrogen ethers, succinylosuccinic ester, and various heterocycles. The number of students in the laboratory is somewhat larger than last year.

Dr. Chambers has recently joined the staff of abstractors for the *Review of American Chemical Research* published by the American Chemical Society. Professor Bogert was one of the committee of fifteen that planned and carried out the Perkin Jubilee held in this city in October. He will act as editor of the organic abstracts which are to appear in the new journal of the American Chemical Society which is to be known as *Chemical Abstracts*.

Physical Chemistry.—The new University fellow in chemistry, Professor H. K. Benson of the University of Washington, is preparing a dissertation for the doctorate on the association of liquids, and the disassociating effect of one liquid upon another. Dr. C. W. Kanolt, the present Barnard fellow, has accepted the position of instructor in chemistry at Adelbert College, after studying for a year at Berlin and Boston. Mr. K. G. Falk, B.S., 1901, Ph.D., Strassburg, 1905, has been appointed assistant in physical chemistry.

The third edition of Professor Morgan's "Elements of physical chemistry" is being translated into German.

Department of Electrical Engineering.—During the summer, Professor Crocker attended the conference of the International Electrotechnical Commission at London, as one of the two representatives of the American Institute of Electrical Engineers, about ten countries being represented. He has been reappointed chairman of the standardization

committee of the Institute, and has also been, for the last six months, a member of the governmental advisory board on fuels and structural materials appointed by President Roosevelt.

M. Arendt, E.E., 1898, has been promoted from lecturer to instructor; Ernest S. Holcombe, M.E., Cornell, 1901, has been appointed lecturer and placed in charge of the instrument and standardization laboratory; S. S. Watkins, E.E., Columbia, 1906, has been appointed assistant in charge of the direct current laboratory, and C. Otto von Dannenberg, B.E., Union, 1906, has been appointed assistant in charge of the alternating current laboratory.

During the past year Professor Crocker and Mr. Arendt have revised the "Practical management of dynamos and motors," which now appears in the sixth edition, entitled "The management of electrical machinery." Professor Sever and Mr. Townsend have recently completed the revision of their laboratory note-book "Laboratory and factory tests in electrical engineering."

Professor Sever has been appointed by the president of the American Institute of Electrical Engineers secretary of the Institute committee on national electric code.

In the budget of the present year, an appropriation of \$3,500 was supplied to the department to enable it to purchase new equipment for its laboratories. There have been ordered a general electric oscillograph, a motor-dynamo set, a number of important instruments, and a constant current arc lighting equipment.

A valuable course in hydraulics has been established for the electrical engineers, the theoretical and development portion being given by the civil engineering department, and the hydraulic machinery, as well as laboratory work, being covered by the mechanical engineering department.

Department of Geology.—During the month of July Professor Kemp was a member of an international commission appointed partly by the U. S. Geological Survey and partly by the Geological Survey of Canada. The object was to bring about the correlation of the ancient crystalline formations in the Adirondacks and the neighboring parts of Canada, and to establish a uniform series of geological names. The first week Professor Kemp guided the party in the eastern Adirondacks, the second week Professor Cushing took it on the northwest, and in the third and fourth weeks Professor Adams conducted it in Canada. In the middle of August Professor Kemp left for Mexico to attend the tenth session of the International Geological Congress, which is discussed elsewhere

in this issue. Professor Grabau left immediately after Commencement and with the aid of a grant from the John Strong Newberry fund of the Scientific Alliance of New York spent two months in eastern Tennessee, West Virginia and Virginia, investigating the Devonian strata. Dr. Berkey completed the field work on the Tarrytown quadrangle of New York for the New York State Survey, and began work upon the West Point area. Both of these when completed will be of special interest to scientific workers in New York City and the valley of the Hudson. Mr. Brown passed some weeks working over the Port Ewen strata in the valley of Rondout Creek, securing results for a later paper.

Heinrich Ries, '92 S., and Ph.D., '95, has been promoted to a full professorship of economic geology at Cornell University; J. D. Irving, '96 C., Ph.D., '99, has been promoted to the full professorship of geology at Lehigh University; and Douglas W. Johnson, Ph.D., 1903, has been appointed assistant professor of physiography at Harvard University, retaining at the same time a non-resident connection with the Massachusetts Institute of Technology, where he formerly taught.

Department of Mathematics.—The rapidly increasing mathematical activity of the country is reflected in the increased demand upon the graduate facilities of the department of pure mathematics. The department has found it necessary this year to offer sixteen courses of graduate character. Of these, two courses, namely, "Elliptic functions" and "Modern analytical theories in geometry," were given in the summer session by Professors Maclay and Keyser with an attendance of over twenty. The number of graduate registrations to date for the current year is over one hundred.

In connection with the summer session of 1906 Professor Keyser gave a public lecture on "Ways to pass the walls of the world," and subsequently lectured on that subject before the summer school of philosophy at Glenmore, N. Y. On the evening of October 10 Professor Keyser delivered a lecture before the mathematical division of the Brooklyn Institute of Arts and Sciences on "The space concepts of Lucretius and Blaise Pascal.

Professor Fiske is preparing for publication as a separate book a revision of his chapter "Theory of functions of a complex variable," contributed some years ago to the volume "Higher mathematics," edited by Professors R. S. Woodward and Mansfield Merriman. Owing to the great demand for copies of the separate chapters of this work, the publishers have decided to discontinue the publication of the work

as a whole and to publish the several chapters as separate books. During the past academic year Professor Fiske delivered two public lectures: one on "The theory of limits" before the High School Teachers' Association of New York City, and one on "The College Entrance Examination Board" in the course in contemporary educational problems given at Teachers College.

Among recent changes in the department may be mentioned the promotion of Dr. Kasner from an instructorship to an adjunct professorship, the appointment of Mr. L. P. Siceloff to a tutorship, and the appointment of Mr. G. W. Hartwell to an assistantship. Mr. Siceloff, who was formerly a graduate student in the department, comes to Columbia from the College of the City of New York. Mr. Hartwell last year held a University fellowship in mathematics at Columbia, and had been previously instructor in mathematics at the Michigan Agricultural College.

Department of Mechanical Engineering.—The only changes in the teaching staff this year are the appointments of Professor Rautenstrauch and his assistant, Mr. S. H. Woods, both from Cornell, who have assumed charge of the theory of engine design and allied subjects.

The fund made available by the trustees for the purchase of new apparatus for the testing laboratory is being expended to the best advantage possible. The old 100,000 pound testing machine has been entirely remodeled, and a new 50,000 pound machine has been installed. Two other machines are nearly ready for installation, and the foundation has been prepared for the 400,000 pound machine, which is being built especially for the University.

Department of Mining.—The new mode of conducting the summer field work in mining adopted last year and referred to in the December, 1905, issue of the *QUARTERLY*, was continued during the past summer. In June and July the regular session, in charge of Mr. E. L. Kurtz and Dr. W. R. Crane, was held in the copper mining district on Keweenaw Point and the Marquette Iron Range of Michigan. Excellent arrangements were made at a number of mines through the kind cooperation of their owners and managers. This class consisted of eight students.

In addition to the above, thirty-two students were sent out either in squads or singly without instructors to different mines in California, Colorado, Montana, Idaho, Utah, Arizona and Mexico, at which the necessary privileges had previously been secured. These students, provided as before with printed instructions and an outline of the work to be done, were required to spend a longer time in the field than those

who were under the care of instructors from the department. Among them were three members of the class who obtained positions at mines, where they worked during the greater part of the vacation. A total of forty mining students were thus engaged in summer work. On the whole the work done by the independent squads was of a very satisfactory character.

Department of Physics.—Professor J. C. Pfister has returned in greatly improved health after a year's leave of absence. Mr. L. B. Morse, B.S., Iowa College, 1903, Mr. H. W. Farwell, A.M., Dartmouth, 1905, and Mr. C. C. Chapin, B.S., Iowa College, 1904, have been appointed assistants. Mr. E. B. Wheeler, assistant from 1903 to 1906, is now instructor in physics in the Case School of Applied Science. Mr. A. H. Nelson, assistant from 1904 to 1906, then lecturer, resigned November 1 to take a responsible position with the Macmillan Co., where his work will be chiefly concerned with scientific books. Professor E. F. Nichols spent the month of August at the Carnegie laboratory for solar research on Mt. Wilson, Cal., engaged in the investigation of problems of radiation.

Department of Zoology.—The summer work of the different members of the staff has been widely varied and covers nearly every field of biological research. Professor Wilson devoted the entire summer to an extensive field trip for the purpose of procuring material for cytological investigations on heredity and sex-production. In connection with this work a large collection of insects was made for the study of variation in correlation with the characters of the chromosome groups. The collection of adult forms, with the corresponding cytological material, represents an area extending across the continent from Georgia to California in the southern region and thence eastward through a more northerly zone, including northern Arizona, New Mexico, Colorado, and a number of the middle and eastern States. Preliminary study of the material collected has already brought to light many new and interesting facts, but its mass is so great that prolonged study will be required for its thorough examination. It is hoped that studies of this kind may throw additional light on the question whether the chromosomes are really to be regarded as forming the physical basis of hereditary characters, and if so, to what extent the factors of heredity can be conceived as undergoing a distribution among the chromosomes.

Professor Osborn spent a good portion of the summer in Dakota and Wyoming in the endeavor to correlate the tertiary faunas of Europe and America. Professor Dean spent the summer in Europe,

where considerable material was purchased for the American Museum of Natural History. Many laboratories were revisited and notes and other data obtained which will prove of value in his present researches. His monograph on the curious shark-like fish, *Chimæra*, long regarded as the primitive vertebrate, has recently appeared from the press of the Carnegie Institute.

Professor Morgan completed the manuscript of his forthcoming book on "Experimental zoology," and revised his earlier book on "Regeneration" preparatory to its second edition, which is to be translated into German. Special experimental work relating to polarity in the hydroid *Tubularia*, and to the effect of strong centrifugal force in separating the constituent elements of the sea-urchin egg were carried on at the same time.

Professor Crampton and Dr. McGregor spent the summer at the marine biological laboratories of Cold Spring Harbour and Woods Hole, respectively, the former working mainly on his long continued research on variation in moths, and upon the extensive material collected during his visit to the South Sea Islands last spring. Professor Calkins accepted invitations to take part in the meetings of the American Medical Association at Boston, of the British Association for the Advancement of Science at York, England, and of the British Medical Association at Toronto. The remainder of the summer was spent in studying the phenomena of maturation and fertilization in *paramecium*, and in gathering material for his forthcoming book on pathogenic protozoa.

The staff of the zoological department at Barnard College regret the loss of Dr. William E. Kellicott, who has accepted the professorship of biology at the Woman's College of Baltimore. Dr. J. H. McGregor and Miss Margaret Read of the Columbia department have been appointed instructor and tutor, respectively, in zoology at Barnard. Mr. C. S. Mead and Mr. C. V. Morrill have been appointed assistants in zoology at Columbia.

FACULTY OF FINE ARTS

School of Architecture.—The school opened with about the usual registration, twenty-nine new names being added to the rolls. Of these, seven are candidates for the degree of bachelor of architecture, coming with at least two years of college training; eleven are candidates for the professional certificate, and the remainder are non-matriculated students. There are six graduate students in architecture, of whom three are pursuing their studies abroad, under the direction of the school, one of

these, Mr. L. E. Smith, being the holder of the McKim fellowship, and another, Mr. Arthur Lobo, the holder of the Perkins fellowship. One of the two resident graduate students is Mr. Emilio Levy, who won the Columbia fellowship in August. Four of the six are candidates for the master's degree, and two for the degree of doctor of philosophy.

There has been one change in the staff of the school, Mr. A. H. Gumaer, instructor in design, having retired to engage in general practice. His place is filled by Mr. Francis A. Nelson, of the class of 1900, who has recently returned from Paris with the *diplôme* of the *Ecole des Beaux-Arts*.

A new lantern has recently been installed in the lecture room. It is a combined lantern and reflectoscope, and can be used for projecting prints, photographs, maps and the like, thus making available for lecture-illustration a greatly increased range of material.

Professor Hamlin was appointed by the building committee of the Brooklyn Public Library and Borough President Coler consulting architect upon preliminary plans for the proposed new Central Library in Brooklyn, and with Mr. F. P. Hill, the librarian, commissioned to visit important library buildings and other edifices in Europe and the United States for the purpose of obtaining information and suggestions relevant to the problem. The trip, which covered parts of England, France, Germany and Austria, proved exceedingly interesting and profitable. The report which resulted will be printed in the *Libraries* magazine.

School of Music.—A gratifying feature of the registration for 1906-07 is the excellent class in harmony. This is the fundamental subject, along the professional line, in the school; and the present class augurs well for the advanced work of the following years. The new curricula leading to degrees in music are now operative. Already three candidates are enrolled for the bachelor's degree in music, although the announcement of this degree has but recently been made public. The students of the University that are particularly interested in music are forming a musical and social organization, centering about the University orchestra. A course of lectures, dealing with various historical phases of music, has recently been added by Professor Rübner.

Professor Rübner expects, in the near future, to publish a number of songs and instrumental compositions. He has recently joined with Mr. Herwegh von Ende and Mr. Modest Altschuler in the formation of a trio. This trio has already given a number of concerts of chamber music in the vicinity of New York, and will be heard at the University several times during the year.

Professor McWhood contributed an article on "Recent progress in education in music" to the September issue of *The Musician*. He has contributed to the *Music Lovers' Calendar* for 1907 an article on "University education in music." His address before the annual meeting of the Music Teachers' National Association will soon be issued in the printed proceedings of the organization.

TEACHERS COLLEGE

Registrations for the present year show a considerable increase in attendance, especially in the departments of domestic science, fine arts, and German. During the last academic year, in response to some fourteen hundred requests, the College was able to supply three hundred and seventy-three graduates or former students for teaching or administrative positions. Of these, forty-one were in universities and colleges, twenty in normal, one hundred and fifty-two in high, and seventy in elementary schools. This makes the College represented in three hundred universities, college and normal schools, in India, Burmah, China, Japan, Brazil, Mexico, Porto Rico and the Philippines, as well as in the United States.

In recognition of the gifts to the college of Mrs. Josiah Macy the professorship of manual training in the College will in future be known as the Macy professorship. In recognition of the gifts of Mrs. J. A. Kemp a Kemp lectureship in kindergarten education has been established.

Beginning with the present year, three new scholarships in Teachers College are operative; the Army and Navy scholarship, referred to in the June issue; a scholarship established for one of their number by the alumnae of Winthrop College, Rock Hill, South Carolina; and a third established by the trustees of Salem College, Winston-Salem, North Carolina, through which one of their teachers will study annually at Teachers College. The class of 1906 at graduation made a substantial contribution to the College.

The educational museum has received a gift from the Imperial University of Tokio of two extensive collections of lantern-slides illustrating school and university education in Japan.

In the New York State Library's annual summary of educational literature in English, five of the twenty-two volumes selected as most valuable came from Teachers College.

Professor Paul Monroe, head of the department of the history and philosophy of education, is devoting a portion of his time to organizing and directing the department of education of Yale University.

COLLEGE OF PHARMACY

Beginning with the spring of 1907, the University sections of the junior and senior classes of the department of pharmacy will pursue part of the work of the supplementary spring course, from April 22 to the close of the academic year, in the physiological laboratories of the College of Physicians and Surgeons. The work of the junior class will be in experimental physiology, and that of the seniors in physiological chemistry and pharmacodynamics.

MISCELLANEOUS NOTES

Professor John W. Burgess, dean of the faculty of political science, delivered his inaugural address as first Theodore Roosevelt professor of American history and institutions at the University of Berlin on **Professor Burgess's** October 27, in the presence of the German Emperor **Address** (who had chosen the day and hour himself), the Empress, Prince August Wilhelm, Ambassador Tower, and a large gathering of professors and students. Professor Burgess received a hearty welcome. At the opening of his remarks he read the following personal letter from President Roosevelt:

"Weisses Haus," Washington, den 12. Oktober 1906

Mein lieber Professor Burgess!

Durch Ihre hochgeschätzte Vermittlung wünsche ich die Universität zu Berlin mit dem herzlichsten Wohlwollen zu begrüßen. Die historische Freundschaft, erst zwischen Preussen und den Vereinigten Staaten und dann, als Preussen das grosse Deutsche Reich begründete, zwischen diesem mächtigen Reiche und den Vereinigten Staaten, ist nie abgebrochen, sogar niemals im geringsten erschüttert worden. Sie nahm ihren Anfang in der gegenseitigen Hochschätzung und in dem gegenseitigen Wohlwollen, welche zwischen Washington und Friedrich dem Grossen damals schon bestanden, und wurde gleich durch die Tatsache befestigt, dass Preussen allein unter allen europäischen Mächten sich willig zeigte, Handelsbeziehungen mit uns, während der Periode unserer Not und Schwäche, in den schweren Jahren zwischen 1783 und 1789, anzuknüpfen und einen Handelsvertrag mit uns zu schliessen. Schon während der Kolonialperiode unserer Geschichte gab es einen grossen deutschen Bestandteil unter unserem Volke, und Männer deutscher Geburt und Abstammung leisteten uns, während der Periode der Revolution grosse und erfolgreiche Dienste als Führer, sowohl im Kriege als im Frieden. Steuben schulte die Revolutionsarmee und Mühlenberg war der erste Sprecher des Repräsentanten-Hauses. — Seit der Revolution hat es fast unausgesetzt eine deutsche Einwanderung hierher gegeben, welche sich von grösster Wichtigkeit für die Bevölkerung unserer Nordwest-Territorien erwiesen

hat. Die Männer deutscher Geburt und Abstammung waren beinahe insgesamt der Union mit Leib und Seele ergeben und der Sklaverei äusserst feindlich. Durch ihre mächtige Hilfe wurden die Nordwest-Territorien zu freien Staaten gemacht, welche das Herz der Republik bildeten. Beim Ausbruch des Bürgerkrieges verdankten wir es den Männern deutscher Geburt oder Abstammung, dass Maryland, Missouri und sogar Kentucky fest zur Union hielten, und während dieser furchtbaren Periode leisteten sie uns in Rat und Tat Dienste, welche nie zu vergessen sind.

Seit dem Bürgerkrieg ist die grosse Auswanderung von Studenten aus den Nordstaaten unserer Union nach den deutschen Universitäten eine der merkwürdigsten und bedeutendsten Erscheinungen unseres geistigen Lebens, und es ist eine der bezeichnendsten Tatsachen unserer amerikanischen Bildung, dass diese auf deutschen Universitäten erzogenen Söhne unserer Republik das höhere Erziehungswesen unseres Landes jetzt leiten und beherrschen. All dies hat mächtig darauf gewirkt, einen Austausch der Kultur zwischen den zwei Ländern zustande zu bringen, welcher in der Begründung der Professur, deren Inaugurierung Ihnen, Herr Professor, aufgetragen ist, gewissermassen gipfelt.

Mit Wiederholung meiner herzlichsten Grüsse an die Universität und mit den besten Wünschen für Ihren Erfolg und den Ihrer Schüler verbleibe ich immer mit Treue und Aufrichtigkeit der Ihrige

(gez.) THEODORE ROOSEVELT

The President's letter was greeted with great enthusiasm and delight, and every mention of his name brought forth applause. At the close of the address, amid much applause, the rector, Professor Julius Kaftan, arose and thanked Professor Burgess for the letter from the President and for his address, whereupon he called for three cheers for the Kaiser, which were given with much vigor. Then the Emperor himself arose and made a brief but stirring speech, which aroused the greatest enthusiasm; when it ended by his raising his helmet in air and calling for three cheers for President Theodore Roosevelt, the building shook with the roar.

A permanent American Institute has been opened in a large room of the university, upon the walls of which have been hung the portraits of President Roosevelt, President Butler and Dean Burgess. About one thousand volumes dealing with American history and public law have been presented to the institute by Professor Burgess, and it is the intention of the authorities to make annual additions to the library, and, if possible, to add the portraits of succeeding Roosevelt professors.

The unfortunate misconstruction and distortion in the American press of some of Professor Burgess's illustrative remarks have given

rise to a totally wrong impression concerning his address. A reading of Professor Burgess's address in its entirety makes it plain that the criticism to which he has been subjected in the American press has rested upon a complete misunderstanding and has been quite uncalled for. It may not be amiss to quote a recent editorial in *Ridgeway's* written by Mr. Samuel Hopkins Adams:

Professor Burgess is an American scholar speaking his honest convictions upon matters of international politics before a learned body. He is in no sense a representative of the United States government. He carries no credentials of State. His expenses are paid by his university to which, and to his conscience, he is solely responsible. . . . It is both the privilege and the duty of the scholar to speak his belief and speak it honorably and with what force there is in him. If the scheme of internationalizing education and scholarship is to be confined to such themes as the binomial theorem and the uses of the ablative absolute in the early Latin poets, it might better be dropped altogether until we emerge from our temporary obscurity by the spirit of the Dark Ages.

* * *

From October, 1898, to June, 1902, Fiske Hall was used as the residence for students of Barnard College. This building was given by Mrs. Martha T. Fiske-Collord for a hall of science and was only tem-

The Barnard College Dormitory porarily used as a dormitory. After it was remodeled, in July, 1902, into laboratories and lecture-rooms, Barnard College students were accommodated in Whittier Hall, where they lived with the Teachers College students. During the current academic year the Associate Alumnae of Barnard College, with the consent of the Trustees, have organized and are managing a temporary hall of residence, in which thirty-one of the Barnard students are living this winter.

By September, 1907, the Trustees hope to have the new dormitory ready for occupancy. This is situated on the Milbank Quadrangle at 116th Street, and is called Brooks Hall in memory of the Rev. Arthur Brooks, D.D., first chairman of the Board of Trustees of the College.

The cornerstone of Brooks Hall was laid on the afternoon of Friday, November 9, 1906. After the reading of the ninety-first Psalm by the Rev. Dr. Edward B. Coe, senior minister of the Collegiate Church in New York, and the offering of the prayer and benediction by the Rev. Dr. William M. Grosvenor in the absence of the Bishop of New York, President Butler spoke as follows:

By reason of the generosity of friends of this College, we are privi-

leged today to lay the cornerstone of this commodious and carefully planned hall of residence. Those who are making this building possible, like those who have provided the buildings that we already use and this splendid and commanding site, have faith in Barnard College. They believe that it now well serves, and will long continue to serve, the women of this city, State, and nation. They hold fast, as we all do, to the conviction that the public and personal advantages that follow upon the higher education of women are no longer matter for reasonable dispute. They hold, as we all do, that women will more efficiently and more wisely bear their natural burdens and will more efficiently and more wisely exert their natural influence if their minds are expanded and their natures broadened by contact with the accumulated stores of the world's knowledge.

Barnard College stands for these principles and for something more. It recognizes that the aim of education, even of higher education, is not knowledge alone, but the careful cultivation of those habits of body, mind and spirit which, welded together, form character. It understands, moreover, that the careful cultivation of these habits is almost measurelessly aided by college residence. The spirit of comradeship and the sense of unity that follow from the living together of students in a home of their own are among the most precious possessions of youth. This residence hall is to be the outward and visible sign of the belief which Barnard College holds.

By authority of the Trustees, this building is to bear a name that will honor and distinguish it forever. It is to bear the name of a man who, from the earliest beginnings of Barnard College, saw the high destiny to which it was called and who labored unceasingly and unselfishly for it. Sweet and gentle in nature as he was commanding in presence, keen in intellect and calm in spirit, Arthur Brooks deserves well of Barnard College, of the City of New York, and of the Christian Church that he loved and served. In honor of him and in affectionate tribute to his memory, the building of which the cornerstone will now be laid by the chairman of the Board of Trustees is to bear the name of Brooks Hall.

After Dr. Silas B. Brownell, chairman of the Board of Trustees of Barnard College, had laid the cornerstone, the academic procession returned to the College buildings, the undergraduates and alumnae singing "Besides the waters of the Hudson," as a recessional. The exercises in connection with the cornerstone laying were followed by a reception in the present buildings.

The following résumé of the activities of the secretary of the Committee on Employment for Students, covering a period from June 1,

Committee on Em- 1905, to May 31, 1906, will no doubt be of interest
ployment to the readers of the QUARTERLY:

The work of the Committee on Employment for Students has made the same steady stride during the past year as each successive annual report has shown since the Committee's establishment in 1895. In that year the reported earnings were \$2,411.00; for the fiscal year just ended students reported earnings to the amount of \$104,240.39. These figures are exclusive of the money secured from scholarships, prizes or academic salaries.

During the year five hundred and eighty-one students applied to the Committee for employment—an increase of forty-four over 1904-05. Only two hundred and seventy-five reported their earnings, and thirty-eight reported failure to secure employment.

As compared with 1904-05, the advance made during 1905-06 shows most clearly in the averages. From 1904-05, three hundred and eighty-eight students reported a total earning of \$92,436.20, and for 1905-06, three hundred and thirteen students reported a total earning of \$104,240.39, making an average for each student of \$235.68 in the former case as against \$333.04 in the latter. Computed on the basis of the total number of applicants, the figures read \$172.13 and \$179.42 for each applicant in 1904-05 and 1905-06, respectively. One year ago one hundred and nine students in the College averaged \$81.88; fifty-eight students in the schools of applied science, \$97.11; thirty-one students in the medical school, \$126.46; sixty-six students in the law school, \$170.81; ninety-five students in the graduate schools, \$255.84; and twenty-nine women students, \$37.93. All of these averages rose a number of degrees in 1905-06: ninety students in the College averaged \$113.43; forty-one students in the schools of applied science, \$163.93; twenty-one students in the medical school, \$129.94; forty students in the law school, \$202.19; ninety-four students in the graduate schools, \$284.59; and twenty-seven women students, \$117.64.

In 1905-06 the Committee had three hundred and eighty-four applications from employers—an increase of fifty over the previous year. Through the subsequent withdrawal of positions, undesirability of certain of the opportunities, and reasons of similar nature, one hundred and eight of these positions were not filled by the Committee.

* * *

The annual reception of the President to the newly appointed professors of the University was held in Earl Hall on October 6. It was attended by about five hundred members of the University community, and was a success from every standpoint. The list of new professors is as follows:

Sir C. Purdon Clarke, director of the Metropolitan Museum of Art; Frederick Dielman, president of the National Academy of Design; Frank W. Jackson, M.D., professor of clinical medicine; Henry Johnson, A.M., professor of history in Teachers College; Edward Robinson, LL.D., assistant director of the Metropolitan Museum of Art;

Hermann Schumacher, Ph.D., Kaiser Wilhelm professor of German history and institutions, 1906-07; and Ashley Horace Thorndike, Ph.D., professor of English.

The following are the new adjunct professors: Adolph Black, C.E., civil engineering; Edward Kasner, Ph.D., mathematics; John Henry Larkin, M.D., pathological anatomy; Charles Edward Lucke, Ph.D., mechanical engineering; Curtis Hidden Page, Ph.D., Romance languages and literatures; Walter Rautenstrauch, M.S., mechanical engineering; and David Samuel Snedden, A.M., educational administration.

* * *

A paper on the distribution of the thousand leading American men of science, presented by Professor Cattell at the last meeting of the National Academy of Sciences, shows that our scientific men have been **American Men of Science** produced very unequally in different parts of the country. The birth rate per million population is in Massachusetts, one hundred and nine; in New York, forty-seven; in Pennsylvania, twenty-three; and in some of the southern States falls as low as one. Their present distribution is also unequal. In regard to university connection sixty-six are at Harvard, sixty at Columbia, thirty-nine at Chicago, thirty-three at Cornell, thirty at the Johns Hopkins, twenty-seven at California, and twenty-six at Yale. Of these scientific men, one hundred and six hold the bachelor's degree from Harvard, fifty-two from Yale, thirty-five from Michigan and twenty-eight from Columbia. Johns Hopkins has conferred the doctorate of philosophy on one hundred and two, Harvard on fifty-seven, Columbia on thirty-eight, Yale on twenty-eight, and Cornell on twenty-six. These figures refer to those who have taken their degrees long enough ago to have become leading men of science. In the course of the past nine years the number of times that the doctor's degree has been conferred by our leading institutions for graduate work is as follows: Harvard, three hundred and four; Chicago, three hundred and three; Yale, two hundred and ninety-six; Columbia, two hundred and eighty-one; Johns Hopkins, two hundred and seventy-two; Pennsylvania, one hundred and ninety-nine; Cornell, one hundred and sixty-two.

* * *

Professor C. F. Chandler, who received the degree of doctor of philosophy from the University of Göttingen in 1856, has been honored **Renewal of Professor Chandler's Doctorate** with a renewal of this degree by the same institution. The document conveying the degree is rather interesting and is here reproduced in full. The reproduction is from one

of the duplicate diplomas which the university distributes, as the impressed seal of the university and signature of Conradus de Seelhorst, dean of the philosophical faculty, on the original diploma would not permit of photographic reduction. It is an interesting fact that the University of Göttingen and King's College, now Columbia, were both founded by King George II of Great Britain and Hanover.

Q·F·F·F·Q·S

AUSPICHS·ET·AUCTORITATE

AUGUSTISSIMI·POTENTISSIMI·PRINCIPIS·AC·DOMINI

WILHELMII II

IMPERATORIS·GERMANORUM·BORUSSIAE·REGIS

DOMINI·NOSTRI·LONGE·CLEMENTISSIMI

RECTORE·ACADEMIAE·GEORGIAE·AUGUSTAE·MAGNIFICENTISSIMO

ALBERTO

REGIO·BORUSSIAE·PRINCIPIS·CHRISTISSIMO·DUCATUS·BRUNSVIGIENSIS·SUMMO·MODERATORI

PRORECTORE·MAGNIFICO

PAULO·ALTHAUS

THEOLOGICAE·DOCTORIS·ET·PROFESSORIS·PUBLICO·ORDINARIUS
ORDINIS·AQUILAE·BURGAE·QUARTA·CLASSE·AUSCRIPTO

VIRUM·ILLUSTERRIMUM

CAROLUM·FRIDERICUM·CHANDLER

AMEROGRAFUM

CHIRURGI·IN·UNIVERSITATE·COLUMBIANA·PROFESSOREM

QUI·POSTUAM·ADOLESCENS·CHIRURGI·STREPTAM·TUO·TEMPORE·ADOLESCENTEM

IN·COLLEGIIS·VEL·NASCENTIUM·VEL·MODO·NATIS

DOCTORE·CURET·PER·QUINQUAGINTA·ANNOS

DOCTORE·OFFICIO·OPTIME·FUPOTUS·SIT

DOCTRINAM·PROPAGAVIT·SCIENTIAM·AUXIT

ORDO·PHILOSOPHORUM·ACADEMIAE·GOTTINGENSIS

SUMMIS·SUIS·HONORIBUS·MORE·MAIOREM·INSTAURATIS·DENUO·CONDEBORAT

REQUE·ILLIUS·DINI·FESTA·SEMINARICULARIA·EX·ANIMO·CONGRATULATUR

LONGAM·FELICEM·ET·CORPORIS·VALETUDINE·ET·MENTIS·VIRIBUS·VALENTIAM·BENEDICTUM·AUGURATUR

INTERSPICI

CONRADO·DE·SEELHORST

ORDINIS·PHILOSOPHORUM·H·T·DECANO

RECTOR·IN·ACADEMIA·GEORGIA·AUGUSTA·SIT·ET·RECTOR·AUGUSTI·A·MUNII



The honorary degree of doctor of science was conferred upon Sir William Henry Perkin at the monthly meeting of the trustees, held **Sir William Henry Perkin, Sc.D.** on November 5, 1906. The candidate for the degree was introduced by Professor Chandler. President Butler in conferring the degree said:

William Henry Perkin, Knight, to whose knowledge and insight it has been granted to open a new era in the history of human industry and to show the way to innumerable applications of science to human affairs,—I gladly admit you to the degree of doctor of science in this University and confer upon you all the rights and privileges that belong thereto,—in token whereof I hand you this diploma.

* * *

The following tabulation of the students of the faculty of applied science who did not return to the University this fall is of considerable interest, and proves conclusively that the standard of scholarship in the faculty is constantly being raised. The figures were compiled by acting-dean Sever.

	Excel- lent	Good	Fair	Poor	With- drew	Total
Chemistry.....				2		2
Civil Engineering.....		1	2	3	2	8
Electrical Engineering.....	1		7	1	1	10
Mechanical Engineering.....			2	9	2	13
Mining Engineering.....	2	3	1	10	3	19
Total.....	3	4	12	25	8	52

* * *

Work on Hamilton Hall* is progressing rapidly, and unless unforeseen delays are encountered, the building will be entirely completed when the University reopens after the Christmas recess. By the middle of December, the second, mezzanine, third, fourth, and fifth floors will probably be ready for occupancy. The electric fixtures, the office book-cases, and the special furniture for the College study have been installed, but the lecture-chairs and desks, which are now on the premises, have still to be placed. Owing to difficulties in securing Joliet stone of the proper grade for the main entrance and corridor, the first floor will probably be finished last, but the offices and lecture-rooms on this floor should be ready by the fifteenth of December, and the stone set before the end of the month. The ventilating and plumbing are now practically completed, and little remains to be done with the heating-plant, except to adjust the automatic temperature regulating device which will control the heating and ventilating apparatus throughout the building.

* Architects, McKim, Mead and White; builder, Charles T. Wills



HAMILTON HALL — SOUTH VIEW.

Since the resignation of Mr. Everett Lynn Thorndike, Ph.D., 1905, who held a position in the office of the secretary of the University for a year and a half, Mr. Frank Diehl Fackenthal, A.B., 1906, has been appointed chief clerk to succeed him. Mr. Fackenthal was business manager of *Spectator* and prominent in various undergraduate activities during his college course. Mr. William D. Knight, A.B., 1906, has been appointed secretary of the Committee on Employment for Students in the place of Mr. Fackenthal.

* * *

The University was represented at the fourth centenary of the University of Aberdeen, held on September 25-27, 1906, by Arnold Hague, who received the honorary degree of doctor of science from Columbia in 1901. Dr. Hague was also the representative of the National Academy of Sciences, and in company with other American scholars and representatives received the degree of doctor of laws from Aberdeen University.

* * *

In recognition of his services in endeavoring to develop friendly relations between American and French universities, President Butler has been made an officer of the Legion of Honor by the President of the French Republic. He was recently appointed by the Regents of the State a member of the State Board of Examinations for a term of five years, beginning with October, 1906.

* * *

Professor Amadeus W. Grabau of the department of geology has been awarded the first Walker prize, given each year by the Massachusetts Institute of Technology for the best memoir on a scientific subject. Professor Grabau submitted an essay on "The interpretation of sedimentary overlap."

* * *

Professor James Furman Kemp, E.M. 1884, received the honorary degree of doctor of science from Amherst College in June, 1906. He received the baccalaureate degree from Amherst in 1881, and graduated from the Columbia School of Mines in 1884.

* * *

Professor Henry M. Howe of the department of metallurgy has been created a Knight of the Order of St. Stanislas by the Emperor of Russia. The Emperor has sent him the star and cross of the order.

SUMMARIES OF UNIVERSITY LEGISLATION

THE TRUSTEES

October Meeting.—The University accepted the relation to the Carnegie Foundation for the Advancement of Teaching set forth in the rules of the Carnegie Foundation under the heading "Accepted institution."

The President reported that the German Emperor had, through the Imperial Ambassador at Washington, expressed his agreement to the creation in Columbia University of the Kaiser Wilhelm professorship of German history and institutions.

The gift of the portrait of Daniel D. Tompkins of the class of 1795, governor of the State of New York from 1807 to 1817, and vice-president of the United States from 1817 to 1825, presented by his grandson William W. Tompkins, Esq., of Newport, R. I., was accepted and the thanks of the University were conveyed to the donor.

The thanks of the Trustees were also tendered to Isaac N. Seligman, of the class of 1876, chairman, and to his fellow-trustees, for the gift of \$1,250 for salaries for the academic year 1905-6; to Mrs. James W. Gerard for her gift of \$1,000 for the maintenance of the Marcus Daly scholarship; to Rutherford Stuyvesant, of the class of 1863, for his gift of \$500, to be added to the Bruce fund for the department of astronomy; to the anonymous donor of \$500, given through Professor Francis Carter Wood, for the purchase of equipment for the department of clinical pathology; to Benjamin B. Lawrence, a graduate of the school of mines in the class of 1878, for his gift of \$250 to maintain an annual scholarship in mining; to James Loeb, of New York, for his gift of \$175 for books on labor for the library; and to Stuyvesant Fish, of the class of 1871, for his gift of a portrait of the late Professor Charles Anthon.

The annual report of the Vanderbilt Clinic was presented, showing a total of 47,235 patients and 163,309 visits for the year ending June 30, 1906.

Certain rearrangements in the departments of chemistry, electrical en-

gineering and Romance languages for the current year were approved, and the budget was amended by the inclusion of the retiring allowances granted by the Carnegie Foundation for the Advancement of Teaching to Professor John K. Rees and Professor Edward H. Castle.

The following appointments were made for the academic year 1906-07: Frederick Taber Cooper, Ph.D., lecturer in Latin; Ernest Selah Holcombe, M.E., lecturer in electrical engineering.

The following appointments for the summer session of 1906 were confirmed: Frederick G. Bonser (education) *vice* John W. Hall, resigned; J. LeRoy Stockton (critic teacher in education) *vice* Benjamin R. Andrews, resigned; Mary Woods (manual training) *vice* Jessie C. Pond, resigned; Herman V. Ames (history) *vice* W. R. Shepherd, resigned; Harvey A. Seil (chemistry); and Leon E. Woodman (physics) *vice* E. B. Wheeler, resigned.

The following additional appointments for the academic year 1906-07 were made: Albert C. Whitaker, Ph.D., lecturer in economics and social science; Harwood Hoadley, A.B., lecturer in classical philology; Maude A. Huttman, A.M., assistant in history; Charles S. Mead, B.S., A.M., and Charles V. Morrill, Jr., A.M., assistants in zoology; James H. McGregor, Ph.D., instructor in zoology in Barnard College (*vice* W. E. Kellicott, resigned); Walter A. Bastedo, M.D., H. von W. Schulte, M.D., and Nellis B. Foster, M.D., assistants in applied therapeutics; Joseph Grant Yocum, M.D., demonstrator of physiology; Frederic L. Wells, Ph.D., assistant in psychology; Alfred Hayes, Jr., A.M., LL.B., Goldthwaite H. Dorr, A.B., LL.B., and Charles H. Ayres, A.B., LL.B., lecturers in law; Chester Arthur Darling, A.M., assistant in botany, from October 1, 1906 (*vice* I. D. Cardiff, resigned); Samuel Shelton Watkins, E.E., assistant in electrical engineering; Adolphe Monell Sayre, A.B., assistant in English; Frank Houghton Sewall, A.B., C.E., assistant

in civil engineering; Otto Kress, B.S., assistant in analytical chemistry (*vice* A. J. Mettler, promoted); Arthur J. Mettler, B.S., lecturer in analytical chemistry; and Warner Brown, A.M., assistant in philosophy in Barnard College (*vice* Rowland Haynes, resigned).

Leave of absence for the academic year 1906-07 was granted to Benjamin Duryea Woodward, Ph.D., professor of the Romance languages and literatures in Barnard College, and James S. C. Wells, Ph.D., adjunct professor of analytical chemistry.

The resignation of the Rev. Alexis William Stein from the chaplaincy of the University, because of ill health, was accepted with profound regret.

The following amendment to the statutes was adopted: To amend chapter IV, section 30, by inserting at its proper alphabetical place in the list of departments, the words "clinical pathology," so that the section shall read as follows:

§ 30. The following departments of instruction are established in the University: anatomy, anthropology, architecture, astronomy, bacteriology, botany, chemistry, Chinese, civil engineering, clinical instruction, clinical pathology, comparative literature, decorative art, diseases of children, domestic art, domestic science, economics, education, electrical engineering, engineering draughting, English, fine arts, geography, geology, Germanic languages, Greek, gynecology, history, hospital economics, Indo-Iranian languages, Latin, law (municipal), law (public) and jurisprudence, manual training, mathematics, mechanical engineering, metallurgy, mineralogy, mining, music, neurology, obstetrics, painting, pathology, pharmacology, materia medica and therapeutics, philosophy, physical education, physics, physiological chemistry, physiology, practice of medicine, psychology, Romance languages, sculpture, Semitic languages, social science, surgery, and zoology.

November Meeting.—The regular order of business being suspended, the degree of doctor of science was conferred upon Sir William H. Perkin, in the presence of the Trustees, of the University Council, and of the members of the division of chemistry.

The President submitted his annual report, which was accepted and ordered to be printed and distributed.

The thanks of the Trustees were tendered to the anonymous donors of \$3,440 for the purpose of providing additional clinical facilities for students of medicine; to the Germanistic Society of America for making provision for a lectureship on the history of German civilization; to Isaac N. Seligman, of the class of 1876, for a gift of \$500 for the purchase of books for the University Library; to H. P. Wertheim for a gift of an operating table, instrument case, and instruments, for the use of the Sloane Maternity Hospital; to the New York Edison Company for a gift made through Mr. John W. Lieb, Jr., third vice-president, of 500 incandescent lamps for the use of the department of electrical engineering; to Mr. Edward R. Smith, of the Avery Library, of three casts representing the chief work in sculpture of the late Dr. Rimmer; to the class of 1880 for the gift of a set of wrought iron doors for Hamilton Hall; to the anonymous donor, or donors, of two fountains to be placed in South Court; to the Earle Memorial Committee for their gift to make possible the Earl Prize of Classics.

It was resolved, that there be established three annual prizes for the encouragement of belles-lettres among the undergraduates of Columbia College, the amount of these prizes to be provided by gift as follows: a prize of \$60 for the best poem; a prize of \$50 for the best critical essay on any work or works of imaginative literature; a prize of \$40 for the best short story; the conditions of award to be those named in a communication to the President dated October 20, 1906, from the adjunct professor of comparative literature.

An appropriation of \$2,500, to be charged to contingent expenses, was made for the purpose of completing the plans, both architectural and engineering, for the Stadium.

The following appropriations from the accumulated income of the Phoenix Fund were made: To the department of mathematics for the equipment of a research laboratory, \$3,000; to the department of physics for special apparatus, \$500.

Frederick A. Goetze, M.Sc., was appointed to be dean of the faculty of applied science and consulting engineer, from and after January 1, 1907, for a term of three and one-half years, or during the pleasure of the Trustees.

Henry Lee Norris, assistant superintendent of buildings and grounds, was appointed to be superintendent of buildings and grounds, from and after January 1, 1907, for a term of three and one-half years, or during the pleasure of the Trustees.

James C. Greenway, M.D., and Peter Irving, M.D., were appointed assistants in clinical pathology, and H. V. Holcomb, M.D., James I. Russell, M.D., Frederick T. Van Beuren, M.D., and Alfred C. Prentice, M.D., assistants in surgery. Morris R. Cohen, Ph.D., was appointed to be lecturer in philosophy.

The following appointments were confirmed: Carleton P. Flint, M.D., instructor in surgery, *vice* C. H. Peck, M.D., resigned; William Darrach, M.D., instructor in surgery, *vice* C. P. Flint, M.D., promoted from instructorship in minor surgery; Haven Emerson, M.D., Curtenius Gillette, M.D., and Isaac Ogden Woodruff, M.D., assistants in medicine; Robert M. Strong, Mech.E., assistant in mechanical engineering; C. Otto von Dannenberg, B.E., assistant in electrical engineering.

Samuel R. Williams, Ph.D., was appointed lecturer, and Grace Langford, Ph.D., assistant in physics at Barnard College.

The title of James C. Ayer, M.D., was changed from assistant instructor in operative surgery, to instructor in surgery; that of Bern B. Gallaudet, M.D., from adjunct professor of anat-

omy and instructor in surgery, to adjunct professor of anatomy and clinical lecturer and instructor in surgery; that of John B. Walker, M.D., from clinical lecturer in surgery, to clinical lecturer and instructor in surgery; that of Percy R. Turnure, M.D., from instructor in minor surgery, to instructor in surgery.

UNIVERSITY COUNCIL

October Meeting.—Scholarships were awarded as follows:

President's University scholarship: Dwight Albert Bartlett, chemistry.

North Adams, Mass.

A.B., Williams College, 1903.

University scholarships:

1. Livingston Corson, Germanic languages.

Morristown, Pa.

B.S., University of Pennsylvania, 1904.

2. Janizo Koyama, economics.

Tokio, Japan.

Waseda University, Tokio, Japan.

3. Eiji Morita Fukano, economics.

Tokio, Japan.

Waseda University, Tokio, Japan.

4. Joseph Albert Mosher, English.

Millerton, Pa.

Ph.B., Syracuse University, 1905.

5. Joseph Henderson Smith, Romance languages.

Newton, Mass.

A.B., Harvard University, 1901.

6. Charles Arthur Stewart, geology.

New York City.

A.B., Columbia University, 1906.

7. Benjamin Franklin Tillson, mining.

New York City.

Ph.B., Yale University, 1905.

8. Axel Reynold Wallin, Latin.

Kenilworth, N. J.

A.B., Augustana College, 1902.

STUDENT LIFE

The first meeting of **Kings Crown** was well attended and a large number of underclassmen were elected to membership. The greater part of the evening was devoted to a discussion of the prospects of the 1907 crew, in which Coach Rice and several prominent graduates were the chief speakers. The Crown has no immediate prospects of securing permanent rooms.

W. E. Kelly, 1907, is the new president of the **Players Club**, and H. C. Atwater, 1907S, is the vice-president. The Club's play committee has received three manuscripts for consideration and expects much more material in the form of single lyrics and songs, which may be selected and embodied in whatever play is chosen.

As usual the **Deutscher Verein** is showing great activity. Several enthusiastic meetings have been held, and plans are being made to hold a *Kommers* on December 4 in honor of Professor Hermann Schumacher.

There is every prospect that this year Columbia will have a **Junior Week**, which will include a theater party, a University tea, a ball, and numerous fraternity receptions and dances. The committee in charge is composed of H. Fowler, L. R. Reed, G. Mackenzie, H. P. Banks, G. H. Bull, W. L. Wood, F. Ware, H. Graham, M. L. White, T. K. Scott, F. J. Huntzicker, E. R. May, R. B. Tucker, and P. W. von Saltza.

Class-elections held this year have resulted as follows: 1907—J. W. Brodix, president; H. Perrine, vice-president; F. L. Hopkins, secretary; C. B. Spencer, treasurer. 1907S—H. M. Beattie, president; J. B. Overbeek, vice-president; T. H. Tullock, secretary; J. Little, treasurer. 1908—Foster Ware, president; F. A. Higgins, vice-president; K. M. Boorman, secretary; W. D. Murphy, treasurer. 1908S—P. W. von Saltza, president; F. J. Huntzicker, vice-president; J. Young, secretary; A. Hanke, treasurer. 1909—H. W. Taylor, president; C. W. Culman, vice-president; J. J. O'Connel,

secretary; W. H. Brown, Jr., treasurer. 1910—P. Renshaw, president; H. Ramsdell, vice-president; E. Klepetko, secretary; R. V. Mahon, treasurer. 1910S—G. D. Hauser, president; S. Guthorn, vice-president; A. G. Marsh, secretary; L. M. Giroux, treasurer.

Musical Affairs have undergone a much needed change. The clubs will be so limited in membership that there will always be a keen competition for places. By this means the management hopes to secure the regular attendance at rehearsals that has been lacking in previous years. A trip is being planned to include several concerts in New England.

The **Philharmonic Society** has been reorganized under the lead of several prominent undergraduates. Several smokers and popular concerts will be held during the year, and the orchestra is expected to play at the meetings of **Kings Crown**.

Since last spring several **fraternities** have moved into new houses. *Delta Phi* has built at 610 W. 116th; *Phi Delta Theta* has bought 565 W. 113th; *Theta Delta Chi* has purchased 619 W. 113th, and *Delta Upsilon* 558 W. 113th; *Zeta Psi* has leased 607 W. 113th.

A reception was tendered to the **graduate students** of all the faculties in Earl Hall on Friday evening, October 12. There were short addresses by members of the different faculties, followed by a pleasant social affair. Professor Hallock spoke on the problems which confront the specialist who is seeking to widen the boundaries of human knowledge, laying stress upon the extent to which each great achievement rests on preceding achievements. Professor Dewey dwelt upon the lack of originality and creativeness in the American universities and expressed the hope that they might become centers of spiritual and intellectual movements in the same fashion as some of the institutions of the Old World. Dr. Beard spoke of the effect of the

manifold interests of the great metropolis upon the corporate life of the University and warned the graduate student of the necessity of relying in a large measure upon his own purposes and ambitions. Professor Perry deplored the tendency of the graduate student to hold allegiance solely to his undergraduate college as *alma*

mater and expressed a desire to see the graduate university regarded as warmly as the college.

A number of Japanese students in attendance at the University celebrated the fifty-fourth birthday of the Mikado on November 3, 1906. Professor Hermann Schumacher was the guest of honor.

ATHLETICS

Great interest is being shown in cross-country running. A large squad of men is working daily, and several very successful handicap runs have been held. The attention being given to this fall work augurs well for a good track-team in the spring. In a dual meet with Princeton, held on November 16, the cross-country team was defeated by the score of 15 to 21.

The annual *sophomore-freshman* games were won by the class of 1909. In several events good time was made, and there is evidently some excellent material in the freshman class.

After careful deliberation the *Rowing Club* has selected James C. Rice, Jr., of Toronto, to coach the crews this year. Coach Rice comes to Columbia with an enviable reputation as a teacher of rowing, and has aroused much enthusiasm by his energetic methods. S. L. Pierrepont, 1907, is manager of the crew and L. R. Reed, 1908, assistant manager.

The annual *fall regatta* on the Harlem was marked by close and hard fought finishes in every race. 1910 Science defeated 1910 College, Liv-

ingston won over Hartley, a crew composed of graduates defeated the second Varsity, while the Varsity crew defeated a crew from the Nassau Boat Club.

On account of the resignation of F. L. Rupp, 1907S, H. R. Graham, 1908S, has been elected manager of the *basket-ball* team. C. L. Hall, 1908S, is the assistant manager.

For the second time the intercollegiate *tennis* championship was won by Robert LeRoy, 1908L. The team was defeated by Princeton by a score of 5 to 1.

J. T. Roberts, 1907S, and A. B. Moss, 1909, are manager and assistant manager, respectively, of the *lacrosse* team.

Fencing Club elections resulted in the selection of W. S. Jacques, 1909, for manager, and D. Armstrong, 1909, for assistant manager.

The *soccer* team has been working faithfully this fall in preparation for an intercollegiate schedule, and has played a number of matches.

C. A. S.

THE ALUMNI

Columbia University Club

We are glad to announce that the Columbia University Club is building two squash-courts in the stable in the rear of their premises, at a cost of \$3,500. The Club is one of the few in the city to have its own squash-courts, the only other university club having courts being that of Harvard. The game has come into such favor, that it will undoubtedly add greatly to the popularity of the Club House. The building of these courts is in charge

of a committee appointed by the Board of Governors of the Club at one of the spring meetings, consisting of George S. Nicholas, Jr., chairman; Archibald Douglas, secretary and treasurer; John T. Conover, John K. Erskine, Jr., Richard A. Monks, Harry C. Pelton and John S. Douglas, which committee was subsequently enlarged by the addition of Harold Payson, R. S. Woodward, Jr., and Charles C. Sargent, Jr.

The stable, heretofore unused, has

dimensions of 20x40 feet, which allows ample room for two squash-courts of the most approved design and dimensions, built one above the other. These courts will be lighted by electricity in the evening, and the plans further call for hot and cold shower-baths, lavatories, about fifty lockers, and a visitors' gallery. The alterations will be completed before the close of the year.

The idea of the committee in raising the amount necessary to build the courts was to secure subscriptions from the members of the Club in amounts of \$25 or thereabouts, and to make these subscriptions a *pro rata* lien upon the earnings of the courts until repaid, or, at the subscriber's option, he can take out the amount of his subscription in tickets entitling him to use the courts. Working upon this basis, about \$2,800 has thus far been subscribed by over one hundred members, of which about \$1,000 has actually been paid. About \$900 is still required to complete the work.

College Alumni Association

The annual meeting of the Association of the Alumni of Columbia College was held on Monday evening, October 29, at Sherry's. At this meeting the following officers were elected for the ensuing year: President, Julien T. Davies, '66; vice-president, F. DePeyster Foster, '68; treasurer, William C. Cammann, '91, and secretary, William B. Symmes, Jr., '98. There were also elected to the standing committee the following gentlemen: Isaac N. Seligman, '76, Arthur T. Hewlett, '92, Joseph P. Grace, '94, Marcellus Hartley Dodge, 1903, and Ernest Stauffen, Jr., 1904.

A committee appointed by the standing committee to consider a plan for procuring a statue of Alexander Hamilton for Hamilton Hall reported that it had examined the statue of Hamilton made by William Ordway Partridge, of the class of 1885. This statue represents Hamilton making one of his great speeches in the New York State Convention of 1788 in favor of the ratification by New York of the Constitution of the United States. It was the recommendation of this committee that the constitution of the Association be so amended as to allow it to contribute toward the cost of this

statue a substantial sum from its permanent fund, and that the balance of the cost of the statue be obtained by subscription. In conformity to the recommendations of this committee, an Association was proposed, permitting the appropriation of the permanent fund to such purposes as may be designated by a two-thirds vote of the members of the Association present at a regular or special meeting thereof and recommended by the standing committee. In accordance with the requirements of the constitution this amendment lies over for consideration at the next regular or special meeting of the Association. It is planned, therefore, to hold a special meeting of the Association in the near future to pass upon this amendment and also to take the necessary steps to carry out the recommendations of the committee with reference to the Partridge statue.

The other business of importance transacted at this meeting, in addition to the reading of the usual reports, was the adoption of an amendment to the constitution, in accordance with which no regular member of the standing committee may hereafter be re-elected to such committee until at least one year after his term shall have expired.

Society of Architects

On Saturday evening, November 17, the quarter-centennial of the foundation of the school of architecture was celebrated by a reception and banquet in the library building, under the auspices of the Society of Columbia University Architects (graduates). The permission to serve the dinner in this building was granted as a special favor in honor of the occasion and as a tribute to professor-emeritus W. R. Ware, the organizer and for twenty-two years the head of the school, and to the late S. P. Avery, who founded the Avery Architectural Library, which has rendered such important and valued service to the school. The reception was held in the Avery Library, and was followed by the dinner in the Law Library, specially decorated for the occasion with bunting and with large architectural drawings by students of the school. President Butler

and Seth Low, Dr. J. H. Canfield, and Sir Caspar Purdon Clarke were the guests of honor; among other invited guests were Thomas Hastings, Professor Hamlin, and Mr. E. R. Smith, of the Avery Library. Mr. D. Everett Waid, president of the Society of Columbia University Architects, presided as toastmaster.

Mr. Low, the first speaker, referred to his acquirement of architectural experience in the building of the present University group, and to his acquaintance with Professor Ware. President Butler followed with a tribute to the value, in the development of educational institutions, of the influence of strong personalities, as exemplified in Professor Ware's long and inspiring services in the school of architecture. Dr. Canfield dwelt on the services to the cause of architectural education, in the founding and upbuilding of the Avery Library, of its founders, Mr. and Mrs. Avery, of its present librarian, Mr. E. R. Smith, and of Mr. Russell Sturgis. Sir Purdon Clarke compared English and American methods of architectural training, and Mr. Hastings and Professor Hamlin followed with warm tributes to the inspiring influence and high ideals of Professor Ware.

After the addresses a half hour was spent in the model-house, where a special retrospective exhibition of students' work had been hung.

About ninety graduates and former students of the school were present, as well as a number of undergraduates. It was a source of great regret that Professor Ware was himself unable to be present; and that Mr. Charles F. McKim and Mr. Russell Sturgis were also prevented by ill-health from attending. The celebration was otherwise most successful and enjoyable, and great credit is due the committee of graduates, under the chairmanship of Mr. S. B. Colt, '88, Arch., who planned and carried out the arrangements.

Sloane Maternity Hospital Alumni

Following is the list of officers of the Society of the Alumni of the Sloane Maternity Hospital for the year 1906-07: President, Frank R. Oastler; first vice-president, Ralph W. Lobentine; second vice-president, Frank S.

Fielder; recording secretary, Andrew J. Gilmour; corresponding secretary, Ralph Tousey; treasurer, Seth M. Milliken; pathologist, Hughes Dayton; editor of transactions, Henry P. de Forest; and trustees, Eugene Coleman Savidge, William S. Stone, and Franklin A. Dorman. The council, consisting of seven members, is made up as follows: The president, the trustees, the recording secretary, the corresponding secretary, and the treasurer. Regular meetings are held on the fourth Friday of October, January, and April.

Western Alumni Associations

The Alumni Council has requested Professor Rudolf Tombo, Jr., to visit the various alumni associations of the University scattered throughout the West, and the trip will be made in January. As matters stand at this writing, the following schedule will be followed:

I. *Alumni meetings*: Detroit, January 3; Chicago, January 4; Milwaukee, January 5; Madison, Wis., January 7; Minneapolis and St. Paul, January 8 or 9; Omaha, January 10; Denver, January 12; Colorado Springs, January 15; Kansas City, January 18; Columbia, Mo., January 19; St. Louis, January 21 or 22; Indianapolis, January 24; Louisville, January 26; Cincinnati, January 29; Columbus, January 30; Cleveland, February 1; Buffalo, February 2.

II. *Lectures*: University of Wisconsin, January 7; University of Minnesota, January 9; University of Nebraska, January 11; University of Denver and Colorado School of Mines, January 14; Colorado College, January 15; University of Kansas, January 17; University of Missouri, January 19; Washington University, January 21; University of Illinois, January 23; University of Indiana, January 25; University of Cincinnati, January 29; Ohio State University, January 30; Ohio Wesleyan University, January 31; Western Reserve University, February 1.

Any alumnus interested is requested to write to the delegate of the Council, at Columbia University, for particulars. It may be necessary to make some slight changes in the program, but probably none will seriously affect the above itinerary.

1827.—Charles Rhind, of this class, is the oldest living alumnus of the University. He is ninety-seven years of age, and resides in New York City. He recently realized on a Mutual Life policy that he had taken out sixty-one and a half years ago, less than two years after the company was formed.

1835.—Thomas Buchanan Gilford celebrated his ninetieth birthday on October 13 by a family dinner at his home in Lexington Avenue, after having registered earlier in the day. He is a grandson of Thomas Buchanan, from whom Elbridge T. Gerry, 1857, Henry Rogers Winthrop, Robert Goelet, 1828, and Robert Goelet, Jr., 1860, are descended.

1871.—Oscar L. Straus has been appointed a member of the Cabinet (see p. 40).

1881L.—Charles F. Beach, Jr., is delivering a course of lectures on American commercial law in Paris and at Lille during the first half of the year, and at Bordeaux and Toulouse during the second half. In succeeding years, it is planned gradually to enlarge the scope of the work, so as to give French students a general view of American law and social and political institutions.

1884L.—Charles E. Hughes was elected governor of the State of New York on November 6. District Attorney William Travers Jerome is a member of the same class.

1886.—On June 13, 1906, the class had a dinner at the Hotel Claremont to celebrate the twentieth anniversary of graduation. Twenty-seven members of the class were present, some of whom had not met since 1886. The dinner was a great success.

1894.—James Cox Howell was married on October 11 to Alice Egbert, at Saint Luke's Church, Montclair, N. J.

1895L.—Arthur Knox was married on November 22 to May Shepherd Barnard at the Church of Christ, Norfolk, Conn.

1898.—Lewis Einstein has been appointed second secretary of the American embassy at Constantinople.

1899.—The initial gathering of the class of '99 was held at Sherry's on the evening of October 29, 1906, at the annual meeting of the Alumni Association.

—Darwin S. Hudson was married to Laura Christine Barclay on October 4, 1906, at Saint Mary's Church, Burlington, N. J.—The plans for the coming joint reunion of Applied Science and College are well under way; it is to be held in the early part of January, 1907.

1899L.—Herbert Allan Knox was married on October 17 to Ethel Harvey in New York.

1902.—Bradley is a partner in the law firm of Tanner and Bradley.—Halstead has severed his connection with the law firm of Addy and Halstead, and is now in the office of Cravath, Henderson and De Gersdorf.—Hincks is in business for himself in the law firm of Anderson, Hincks and Humiston.—Phillips is editing a country newspaper in Mazeppa, Minnesota.—Members of the class are earnestly requested to cooperate with the class secretary in securing items for this column in the *QUARTERLY*, by sending to him any bits of news about themselves or about other classmates. Notices of changes of address also are particularly desired. Communications should be addressed to G. O. Ward, 420 West 144 Street, New York City.

1904.—The class was saddened during the past summer by the death of James Theodore William Malmberry, who was taken from us just as he had completed his course in the law school and as he was preparing to enter upon his life's work. He was a loyal classmate and true friend, and his loss is felt most deeply.

Ph.D. Notes

Stephen Pierce Duggan, 1902, and Herbert R. Moody, 1901, have been appointed associate professors, Holland Thompson, 1906, and Walter E. Clark, 1903, assistant professors, and Nelson P. Mead, 1906, Mario E. Cosenza, 1906, and Thomas B. Moore, 1906, instructors, at the College of the City of New York.—Shepherd I. Franz, 1899, has been made professor of psychology at George Washington University.—Lewis N. Chase, 1903, furnished the introduction to Emerson's essay on Compensation recently published by the University Press of Sewanee, Tenn. The *N. Y. Times Saturday Review* of August 25 contained an article by him

on "The lyrical poems of William Blake."

A meeting of the Association of Doctors of Philosophy will be held at the Columbia University Club on the evening of December 14. The speakers will be President Butler, Professors Perry and Shepherd of Columbia, Dr. Jones of Princeton, and Dr. Yatsu.

North Carolina Alumni Association

The Columbia University Alumni Association of North Carolina was organized in Durham, N. C., on the evening of November 26, Professor C. L. Raper, Ph.D. 1902, of the University of North Carolina, being elected president, and J. Henry Highsmith, T.C. 1906, of the Baptist University for Women (Raleigh), secretary. There are about forty Columbia men in the State, of whom four are teaching at Trinity College, Durham, and four at the University of North Carolina. Present at the meeting were W. K.

Boyd, Ph.D. 1906, C. W. Edwards, Pure Science 1898, W. H. Glasson, Ph.D. 1900, J. H. Highsmith, L. L. Hendren, A.M. 1901, Ph.D. 1905, W. S. Marten, B.S. (T.C.) 1905, C. L. Raper, and Professor Tombo.

Virginia Alumni Association

A Columbia University Alumni Association of Virginia was established in Richmond, Va., on November 27. An informal dinner was held at the Hotel Jefferson, which was attended by Dr. Philip Taylor, 1876M., M. A. Martin, T.C. 1905, Dr. W. W. Dunn, 1894M., Emory Hill, 1904C., and Jackson Davis, Phil. 1907, of Richmond; J. F. Messenger, Ph.D. 1903, of Farmville; R. McL. Crawford, T.C. 1905, and A. B. Coffey, T.C. 1904, of Williamsburg; A. B. Seldner, 1882L., of Norfolk; Bruce R. Payne, Ph.D. 1905, of Charlottesville; J. A. Chanler, 1883C., of Cobham; Hickman Price, 1909C., Dean Goetze and Professor Tombo.

NECROLOGY

AUSTIN, Thomas Septimus, E.M. 1876, died on August 22, 1906. Mr. Austin was general superintendent of the southern department of the American Smelting and Refining Company.

CHITTENDEN, Thomas Rockwell, M.D. 1849, died on September 27, 1906.

COOPER, Hunter Pope, M.D. 1883, died at Atlanta, Ga., on August 24, 1906. Mr. Cooper was professor of anatomy and clinic surgery at the Atlanta College of Physicians and Surgeons.

HOLMES, Philip Woodruff, A.B. 1857, died at Montclair, N. J., on August 24, 1906, aged seventy years.

LEFFERTS, Franklin Baker, B.S. 1900, died after a long illness at Roosevelt Hospital on November 9, 1906, aged twenty-eight years. He was a member of the Alpha Delta Phi fraternity, and the Senior Society of Nacoms.

MULLER, Edmund Howd, Ph.B. 1891, A.M. 1892, Ph.D. 1894, died of typhoid fever in the Nyack Hospital on November 7, 1906, aged thirty-seven years (see p. 37).

MYNDERSE, Wilhelmus, LL.B. 1875, A.B. Williams 1871 and A.M. 1874,

died at Brooklyn from heart-failure on November 15, 1906, aged fifty-seven years. He was a director in several banks and trust companies, a member of the Sigma Phi fraternity, the University, Grolier and Hamilton clubs and the Down Town Association.

PAYNE, William Anderson, M.D. 1899, died on January 10, 1906.

PINCKNEY, Samuel Grey Courtney, M.D. 1893, died on September 20, 1906, aged thirty-seven years.

RIDSDALE, Thomas Weddle, E.M. 1883, died from cerebral meningitis at Montclair, N. J., on September 28, 1906, aged forty-nine years. He entered the service of the New York and New Jersey Telephone Company as manager of the right-of-way department fifteen years ago.

SPALDING, George Atherton, M.D. 1875, A.B. Andover College 1872, died in New York City of heart-disease on October 2, 1906, aged fifty-seven years.

WISSMANN, John Frederick, A.B. 1866, died at his summer home in Saratoga on October 2, 1906, aged sixty-three years. Mr. Wissmann had retired from business five years ago.

STATISTICS

An inspection of the accompanying table will show that there has been a slight decrease in the total registration of the University in comparison with last year, the decrease being due primarily to losses in several of the professional faculties.

Columbia College shows a considerable increase over last year, the registration in this faculty having reached the high-water mark. There will no doubt be forty or fifty new students in February, which would bring the total registration at the close of the year to about 650, as against 589 for 1905-06. The entering class in the College is the largest in its history.

Barnard College continues to show an increase and the figures will probably pass the 400 mark before the close of the year. It should be remembered that students in music were registered at Barnard College in 1903 and in previous years. This circumstance explains the apparent decrease in registration after 1903.

The graduate faculties of political science, philosophy and pure science all have practically as many students as they did last year. This year for the first time the period of registration was reduced considerably, and as a result a number of students who did not report at the University in time failed to register altogether.

The faculty of applied science again shows a decrease over the preceding year, although the number of new students is equal to that of last year. The requirements for advancement in this faculty have been increased considerably, and as a result a number of students who were unable to maintain their standing found it desirable to leave the institution. The tabulation on page 92 shows that there has been a considerable improvement in the quality of the material, from the standpoint of scholarship. In comparing the applied science totals, it should be remembered that in 1903 and the years preceding the students in the school of architecture were included in the applied science figures.

Under the faculty of fine arts, the

school of architecture shows a decrease, due to the increased requirements for entrance to the course leading to the degree.

The law school shows a slight falling off this year, although the entering class is much larger than that of 1905. To the 92 students in the first year class should be added 22 men from Columbia College enrolled also under the law faculty. The requirements for advancement in the law school have been strengthened considerably, and this accounts to a certain extent for the decrease in the second-year and third-year classes.

All four classes of the medical school are classes which entered under the increased requirements, whereas last year there were only three such classes. The probabilities are, therefore, that the attendance at the medical school has reached its minimum this year, and from 1907 on there should be a gradual increase in the size of the entering class. There are four students from Columbia College in the first-year class, which brings the total registration in this class to ninety.

Conditions at the College of Pharmacy are similar to those in the medical school, inasmuch as both of the present classes entered under the increased admission requirements, whereas last year one large class which had entered the year before the strengthened requirements became operative still remained. The increase in the number of graduate students at the College of Pharmacy is very encouraging.

In spite of the fact that the first year class at Teachers College has been abolished, this school shows an increase in primary registration of fifty-one over last year. In 1905 and the years preceding, Columbia and Barnard students who were also candidates for a diploma in teaching were included under Teachers College, but if the primary registration only is counted, it would show an increase from 667 in 1905 to 718 in 1906.

R. T., JR.

NOVEMBER 7

Students registered in :	1899	1900	1901	1902	1903	1904	1905	1906
Columbia College	446	464	481	485	493	527	557	606
Freshmen	106	124	141	157	119	145	157	160
Sophomores	113	95	102	85	111	113	130	156
Juniors	89	99	98	128	112	117	112	128
Seniors	93	88	94	70	110	106	113	111
Non-matriculated	45	58	46	45	41	46	45	51
Barnard College	223	292	328	345	399	363	371	398
Freshmen	54	82	99	92	101	110	103	112
Sophomores	38	51	73	79	74	75	95	89
Juniors	39	39	48	73	81	70	77	109
Seniors	39	52	50	49	77	83	81	64
Non-matriculated	53	68	58	52	66	55	15	24
Total undergraduates	669	756	809	830	892	890	928	1004
Faculty of Political Science	118	109	142	150	143	148	174	177
Faculty of Philosophy	108	239	280	317	382	392	490	492
Faculty of Pure Science	53	64	54	57	95	160	140	139
Barnard College	71	8	8	8	8	8	8	8
Auditors	22	20	18	23	17	9	—	—
Total non-professional graduate students	372	432	494	547	637	709	804	808
Schools of Applied Science	464	546	604	685	719	589	566	524
First-year	130	153	193	222	177	156	140	137
Second-year	114	132	156	184	226	164	164	158
Third-year	111	123	127	149	146	156	112	118
Fourth-year	69	99	91	87	104	85	94	87
Non-matriculated	37	33	31	38	53	28	22	24
Graduates	3	6	6	5	13	†	†	†
Fine Arts						109	139	113
Architecture	†	†	†	†	†	74	107	87
Music	†	†	†	†	†	35	32	26
Law School	377	427	443	468	384	342	277	261
First-year	166	172	165	182	104	106	70	92
Second-year	111	151	150	135	149	98	107	69
Third-year	99	100	126	129	119	127	92	85
Non-matriculated	1	4	2	22	12	11	8	15
Medical School	757	751	815	777	669	560	424	352
First-year	226	245	269	203	107	97	79	86
Second-year	159	190	199	205	164	106	83	80
Third-year	158	148	179	181	191	156	100	79
Fourth-year	173	147	148	171	178	190	152	94
Non-matriculated	41	21	20	17	29	11	10	11
College of Pharmacy						435	353	254
First-year						261	97	107
Second-year						157	232	106
Graduates						17	24	41
Teachers College	317	448	557	563	624	640	792	726
First-year	42	24	17	43	29	29	24	—
Second-year	19	30	28	21	46	41	51	43
Third-year	80	93	141	155	201	237	308	273
Fourth-year	46	76	79	145	174	195	236	239
Non-matriculated	38	40	19	54	40	23	32	22
Graduates	92	127	162	83	95	99	141	149
Auditors and unclassified students		58	111	62	39	13	—	—
Total professional students	1915	2172	2419	2493	2396	2675	2551	2230
Double registration †	—	105	136	120	189	218	266	156
Net total resident students	2956	3255	3586	3750	3736	4056	4017	3886
Summer Session		417	579	643	1001	961	1018	1041
Double registration **		108	86	91	180	184	280	277
Grand total regular students	2956	3564	4079	4302	4557	4833	4755	4650
Students in extension courses	750	721	420	535	732	684	964	1017
Officers	412	440	449	473	509	551	573	571

In addition to the above there are this year 998 pupils in the Horace Mann School and 218 in the Speyer School.

* From October, 1900, women graduates registered under the University faculties.

† Graduate students in applied science are now registered under the faculty of pure science.

‡ Students in architecture are included under applied science previous to 1904.

§ Students in music are included under Barnard College (non-matriculated) previous to 1904.

|| Includes candidates for University and Teachers College degrees, and one candidate for B. S. and B. Mus.

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